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INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week
Teamwork Scores Touchdowns
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Unionism Is Reactionary
It's a Great Life—If You Don't Weaken
Let's Be Realistic
Patriotism Has a Real Meaning
Let's Count Our Many Blessings
We're In STYLE
Let the Freedom-Bell Ring
You Can Say This Again

Story of the Week

Jud Sayre of Bendix is a neighbor and close friend of Notre Dame's football coach, Frank Leahy. Notre Dame's football season started late this season; and on the last Saturday of September, Jud entertained Frank in his home.

They were watching a televised broadcast of a football game when Leahy leaped from his comfortable chair and shouted:

"Run that play over again!"

For a moment, Frank had imagined that he was watching movies of a Notre Dame game.

And that reminds us of the yarn about a southern football coach who, one night last summer, was re-running the film of a game his team had won over a superior foe.

"Hey!" he yelled. "Zablowitz missed an easy tackle there. Wait till I get my mitts on that so-and-so."

"What will you do to him?" asked a guest.

The coach calmed down.

"Nothing," he admitted, sheepishly. "Zablowitz was graduated in June."

**Teamwork Scores
Touchdowns**

Agreeable followers of "Inside Dope," which so often extols the virtues of individualism, understand that personal self-interest is the prime motive force which bestirs men to do bigger and better things. They also realize that teamwork pays off occasionally, too—especially if the teams are small. For instance:

Whenever an enthusiastic aggregation of ambitious young men converges upon and swarms all over a single bright new idea, miracles often occur.

Although every member of this team may be an aggressive individualist himself, each one of these smitten young fellows may become so enamored of the joint IDEA they're all promoting together that he subordinates his own selfish interests, and dedicates his exuberant physical and emotional "drive" toward the success of that mutually embraced IDEA. Thus it happens that "collective action" can do things, go places, and get results—on a limited scale.

Historians have explained how and why this sort of inspired team loyalty has moved mountains in the spheres of religion and politics. And it's well-known that team-spirit also works wonders in sports and in business. Case-history after case-history can be resurrected to prove the point that a few ambitious young men, accidentally thrown together (but mutually stimulated) can amalgamate brilliantly to make an ideal come to life.

That ideal may result in a new industry-like air conditioning. It may result merely in a new method of speeding up laundry service for a community. Or it may be misapplied and prostituted by Communists. But no matter what the relative magnitude or usefulness of the IDEA or the IDEAL to which they dedicate their labors and their

**York To Emphasize
Merchandising of
Packaged Models**

CLEVELAND—York Corp., pioneer manufacturer of heavy refrigeration and air conditioning equipment, is now wearing "the new look."

Distributors, dealers, and contractors from this region were agreeably startled here Dec. 1 and 2, at the first of a series of district sales meetings, to discover that the 1948 York program is based upon lively merchandising of new products, rather than upon strict attention to engineering alone.

Spearheaded by John Hertzler, vice president and general sales manager, and ably powered by the sprightly two-man team of Walter Landmesser and Dean Seitz, York's presentation of its new frozen foods storage cabinets, packaged air conditioners, and an advanced automatic ice-maker was showmanship personified at the Cleveland meeting.

The ice-maker (which freezes unique ice cubes with holes in the centers), the 35-cu. ft. upright frozen foods cabinet, and the 16½-cu. ft. chest-type freezer, were interesting in themselves to the York representatives. But unlike previous new product presentations in York's 60-year history, the emphasis of this meeting was on selling, rather than on engineering features.

Pursuing the "One Foot in the Door" formula of interspersing sound merchandising advice with pertinent humor, Hertzler, Seitz, Landmesser, and P. B. Hoppin put on a show which was in the true John Patterson tradition.

As a distributor from Toledo put

(Concluded on Back Page, Column 5)

**ASRE Atlantic City
Meeting This Week**

ATLANTIC CITY, N. J.—The American Society of Refrigerating Engineers' forty-third annual meeting was scheduled to get under way at 10 a.m., Dec. 8, with its first technical session at the Hotel Traymore here.

Many members and guests were on hand Sunday, however, to participate in various committee meetings, the council dinner meeting, and the reception held at 5:30 p.m., by the Philadelphia Section, which is host to this meeting.

In addition, the section will also hold a "beer and skittles" party Monday evening, Dec. 8. Other entertainment features include the welcome luncheon on Monday, a luncheon for the ladies on Tuesday with "surprise entertainment," and the annual cocktail party and dinner-dance Tuesday evening.

Trips to a champagne plant, orchid nursery, and a frozen food plant have also been programmed for the ladies, according to the Philadelphia A.S.R.E. section.

(Concluded on Page 7, Column 1)

**N.Y. Dept. Stores Sell 2%
Less During Nov. 29 Week**

NEW YORK CITY—Despite efforts of department stores here to top the unusually high sales level achieved last year, sales for the week of Nov. 29 fell 2% below those of a comparable week in 1946, it was reported.

For the four weeks ending Nov. 29, however, sales were 5% above last year.

At this time last year, local retailers were experiencing a heavy buying wave following the end of the trucking strike.

Now, however, they are finding response poor to special pre-Christmas sales playing up heavy price reductions, it was revealed.

**Customers Now
Willing To Wait
On Refrigerators****New York Report Says
They Seek Top Brands;
Supply Still Short**

NEW YORK CITY—Independent appliance stores are experiencing difficulty in selling all but a few top brand refrigerators, despite continued shortages, declares the *New York Times*.

Quoting a spokesman for several independent dealers, the *Times* reported that "customers who are definitely interested in purchasing refrigerators are passing up merchandise available for immediate delivery to wait for top brands."

The power of sustained national advertising by top-name manufacturers combined with the failure of retail salesmen to point out advantages of six or seven brands meeting with only secondary consumer acceptance because of limited promotion has created this condition, according to independent dealers.

There is no parallel here to the off-brand radio situation because the refrigerators now lagging in sales are technically as good as the leaders, or nearly so, these dealers are reported as saying.

Although consumer resistance to top-name brands has increased 3% (Concluded on Back Page, Column 2)

**Paley Mfg. Household
Model Is 3.5 Cu. Ft.**

BROOKLYN—Measuring only 34½ in. high, a 3½-cu. ft. household refrigerator has been introduced by Paley Mfg. Corp. under the trade name of "Lo-Boy."

Height of this refrigerator makes it adaptable for counter or under-counter installations in many kitchens, if desired. The box is 24 in. wide and 22½ in. deep. Interior dimensions are 19 in. high, 19¾ in. wide, and 17 in. deep.

Two ice cube trays and a defrost tray are included in the box, which is fitted with two shelves and has a shelf area of 7.8 sq. ft. A Ranco temperature control is employed, and the refrigerator is fitted with an

(Concluded on Page 4, Column 4)

**Dealer Lets Adults Write Notes to Santa
So Friends Will Know What Gifts To Buy**

ROCHESTER, N. Y.—The Columbia Music & Appliance Store, 77 Clinton Ave. S., here, has come up with a unique service to help make sure that grownups, too, got the gifts they wanted for Christmas.

The store set up a "Christmas Clearing House," described as the first in America, through which adults were invited to write their Christmas gift desires on coupons provided by the store and include the name of the person from whom they'd like to receive the gift.

The participant then mailed the coupon or brought it to the store. The participant's family was informed confidentially by mail exactly what was asked for. The coupons were pasted on cards and filed alphabetically, for easy reference, in a special service section of the store. The information also was mailed to each person whom the coupon user named.

The store launched the unique promotion with a large newspaper advertisement which explained the en-

Bankers Rap Plan**For Credit Curbs**

WASHINGTON, D. C., Dec. 2—The 12 banker members of the Federal Reserve Council, advisory group to the chairman of the Federal Reserve Board, told a Senate Banking Committee here today that they were "unanimously opposed" to proposals for renewing restrictions on instalment buying.

The proposal for the return of instalment buying controls has been considered the No. 1 step in the Administration's anti-inflation program.

Robert V. Fleming, president of the Riggs National Bank of Washington, member of the Federal Reserve Advisory Council who gave the principal testimony before the committee, opposed the return of consumer credit controls on the following grounds:

1. There has been "too little experience" as yet to determine the actual effect of free instalment buying since the wartime controls were dropped.

2. There is a basic opposition to granting the Federal Reserve Board new regulatory powers.

**Farm & Home Freezer
Assn. Disbands Soon**

WASHINGTON, D. C.—Members of the association assembled in a special meeting at the Mayflower hotel here, late in November, voted to disband and liquidate the Farm and Home Freezer Manufacturer Association on or before Jan. 31, 1948, which is the end of the association fiscal year.

A special committee of the association has been surveying possible methods and plans of publicizing the food freezer industry and after a four months study, recommended that the association having accomplished its primary purpose of handling W.P.B. problems might best serve and benefit the industry by dissolving the present group, thereby leaving the individual members free to affiliate with either or both of the major refrigeration associations.

By so doing, it was believed that the consolidated effort of the "dollar volume" majority of home freezer manufacturers might produce and carry out a national publicity advertising and educational campaign which the membership of the Farm and Home Freezer Manufacturers Association felt was necessary to the continued successful sale of the products of the freezer industry.

tire operation and also carried a coupon. The advertisement pointed out that more coupons could be secured at the store.

The advertisement showed persons how to fill in the coupon. At the top of the coupon was the name of the store and its address. Style of the coupon follows:

Christmas Clearing House
Columbia Music & Appliance Store
77 Clinton Ave. S., Rochester, N. Y.
Please tell
that this is what I'd like for
Christmas:
.....
.....

Also please put this card in your
Christmas Clearing House for
friends and relatives to look at.

Name

Address

The participant was instructed to write in the name of the person (Concluded on Page 4, Column 5)

**'Predictors' Say
Priorities Would
Hit Appliances****But Administration Plan
For Materials Controls
Leaves Much In Doubt**

DETROIT—Some of the "predictors" who claim to know what the anti-inflation and foreign aid programs will mean to the U. S. economy were saying last week that the program might eventually look like a modified form of the W.P.B. wartime controls, with a definite effect on the production of consumer durable goods items.

For example, the Washington correspondent for the *Detroit Free Press*, quoted a top Administration spokesman as saying that the aid-to-Europe program would affect prices and cause hardships in this country. "Deluxe model washers and refrigerators will virtually disappear, there will be a longer waiting period for new cars, and prices will be inflated further," the *Free Press* correspondent reported this official as predicting.

Some of the "confidential news services" predicted that allocations of the use of scarce materials were sure to be voted, and that inventory controls would also be invoked. It was said that surveys had already been started to determine how much steel was saved by curtailment orders under W.P.B. during the war.

However, such predictions are not as yet being borne out by any actions of the special session of Congress. Up to the time that this issue had gone to press, this is what had taken place:

Secretary of Commerce Harriman, appearing before both Senate and House committees, requested the following powers:

1. "Limited" power to direct the distribution of iron and steel.

Secretary Harriman declared that he had no intention of attempting to say how much steel any major steel consumers shall receive. Instead, he said, the Department of Commerce is seeking only the power to issue steel priority orders to increase the output of such important items as freight cars, farm machinery, and "possibly" petroleum, and to limit the use of the basic metal by the "less essential" consumers.

2. An extension of the government's present unlimited power to control the use of tin and tin products.

3. "Limited" power to control the use of a number of other commodities.

In this connection, he said the Department of Commerce should (Concluded on Back Page, Column 3)

**Home Furnishing Sales
Drop from Sept. High**

WASHINGTON, D. C.—Retail sales in home furnishings stores during October, along with those in general merchandise, apparel, and jewelry stores, fell below September's high level but stayed above the midsummer average, the U. S. Department of Commerce has reported.

The Commerce Department noted, however, that October retail sales in general rose 7% above September and 13% higher than October, 1946. Dollar volume was estimated at \$10,025,000,000.

After adjustments for seasonal factors and the additional number of trading days, the October index figure was only one point higher than September's—291 as compared to 290—the department said. The October, 1946, figure was 260. These figures are based on the 1935 to 1939 average which has been set at 100.

Credit Bureau Advises Fort Wayne Buyers How To Guard Credit Standing

FT. WAYNE, Ind.—The Credit Bureau of Ft. Wayne, through its manager, William J. Bruton, issued the following list of four suggestions for credit buyers to be posted in retail outlets catering to credit business, in view of the strong upsurge of credit buying since the restrictions were lifted Nov. 1:

1. Remember, credit does not raise your salary—it just lets you pay for your purchases over a longer period of time. It's all right to buy the wife a new washer or a new fur coat for Christmas if you're sure you'll have the money for the last payment in June.

2. Keep track of the amount due on each charge purchase. A lot of little bills can spell trouble on the first of the month unless you total the payments before buying.

3. Cooperate with your credit department by giving them the information they ask when you open an account. You, the merchants, and the credit bureau are all interested in getting your merchandise quickly.

4. Pay your bills promptly. Your credit record, kept in the credit bureau's files, is an accurate picture of your attitude toward obligations. Although few people realize it, a good paying record in Ft. Wayne provides you with a credit card, good in 1,402 cities all over America. The members of the Associated Credit Bureaus of America exchange reports on customers each time they request credit in another city.

October Appliance Sales Drop Somewhat Below September In Nashville

NASHVILLE, Tenn.—Sales of major appliances in Nashville during October dropped somewhat below the September level, a report issued by the Nashville Electric Service has indicated.

Only home freezers registered a gain—from 14 to 19 units.

Ranges skidded three units below September to 448 units sold in Oct. 14% to 419 units, while water heater tober. Refrigerator sales decreased sales fell nearly 36% to 355 units.

Eighty-one dealers were covered in the utility's report.

Bendix Appliance Output Hits 65,000 Units In Nov.

SOUTH BEND, Ind.—Bendix Home Appliances, Inc., produced approximately 65,000 units in November, Harry L. Spencer, vice president in charge of manufacturing, has announced. Output included 51,000 automatic washing machines, 4,500 automatic home ironers, and 9,500 automatic clothes dryers.

To Dec. 1, the company had produced approximately 641,750 units—558,500 washers, 43,000 ironers, and 40,250 dryers.

November production of Bendix automatic washers was 56% greater than the output of November, 1946 and the 11-month total was more than doubled.

Wilson Refrigeration Offers Food Spoilage Insurance To Owners of Freezers

SMYRNA, Del.—A food spoilage insurance plan which will protect consumers from food losses that may be caused by extended power failures during hurricanes, storms, floods, and similar catastrophes is now being made available to owners of home and farm freezers manufactured by Wilson Refrigeration, Inc., states A. A. Davis, vice president and general sales manager of the company.

"While under normal circumstances, there should be a little if any, food loss resulting from mechanical failure, there always remains the possibility of power failure due to storms, hurricanes, floods, etc. In order to eliminate this chance of food loss through a trick of nature, we now are making it possible to insure food spoilage through our Spoilage Insurance Plan," Davis said.

The new plan now introduces a policy which covers foodstuffs contained in Wilson freezers against spoilage caused by outside power failure or mechanical breakdown of the food freezer unit. Such a plan was brought about through arrangements with the Phoenix-Connecticut Group of Insurance Companies, who will make insurance available to owners of Wilson home and farm freezers when installed in their residences.

The plan provides for coverage at a low cost to the owner for optional periods of either one year, three years, or five years from the date of purchase of a food freezer.

New Nationwide System of Self-Service Laundries Formed; To Use Launderalls

NEW YORK CITY—Formation of a new nation-wide system of self-service laundries, designed to improve and standardize their operation was announced recently by A. L. Hansen, president of the Launder-Ease Sales Corp., 110 E. 23rd St., New York City.

The corporation offers a "complete package" plan to prospective operators of self-service laundries, such as ex-GI's, covering all phases from the planning and construction stage to actual operation and even to cost-lowering purchasing of essential equipment and laundering materials.

The Launder-Ease Corp. plan excludes all compulsory fees or other payments by operators based on number of machines used or any other tie-in obligations.

Launderall automatic washing machines, manufactured by the F. L. Jacobs Co., Detroit, will be used exclusively in this new system which expects to have 300 self-service laundries in operation within the next 12 months.

The first Launder-Ease, as the new self-service laundries will be known, will be opened in mid-December at 5703 Main St., Flushing, N. Y. It will be equipped with 24 Launderalls, two extractors, and two gas dryers. The Launderalls were obtained through Colen-Gruhn, Launderall distributor in the metropolitan area.

This will be the "pilot store" of the system where Launder-Ease operators in the metropolitan area will be trained without charge in all phases of the business including management, sanitation and mechanical service. A lecture and demonstration room for this purpose has been provided. A second pilot store will be opened in Alexandria, Va., early in January.

"There will be no franchise fee or charge for use of the Launder-Ease name," Hansen said. "We merely offer prospective self-service laundry operators, architectural, heating, plumbing, sanitation, and management services. Group-buying enables us to furnish operators with Launderalls, boilers, dryers, extractors, detergents, soap, signs, tickets, and other materials at far less cost than the operators themselves could purchase them. We instruct operators on how to service their own machines. We give them the benefits of our experience in the development of self-service laundries so they will not make the mistakes others have made."

In the New York City, Baltimore-Washington, Chicago and Detroit areas, the Launder-Ease Corp. has been given the right to set-up Launderall-operated commercial laundries with the Jacobs distributors and dealers cooperating. This arrangement may be extended to other territories.

"We are primarily interested," Hansen said, "in having the operators make a success of their enterprise. The first requisite is from \$6,000 to \$10,000. With such capi-

tal, it is possible to open a self-service laundry which, if conditions are favorable, will start paying for itself within the first month of operation. It is a business which service veterans, with bank credit easily available, can enter with profits accruing almost immediately."

Hansen made it plain that his corporation does not participate in the financing of the self-service laundries "but we will be ready at all times to explain the financial requirements to those interested."

Six areas have already been set up for the promotion of Launder-Ease. They are:

1. All of the New England States.
2. Metropolitan New York and New Jersey.

3. Pennsylvania and the balance of New York State.
4. Delaware, Maryland, District of Columbia, Virginia, West Virginia.

5. Michigan, Northern Ohio, Northern Illinois, Northern Indiana.
6. Southern Ohio, Southern Illinois, Southern Indiana, Kentucky, Tennessee.

The corporation eventually intends to cover:

- Area 7—Balance of Southern Atlantic States and Alabama.
- Area 8—Texas and Louisiana.
- Area 9—Wisconsin, Minnesota, and Nebraska.

Launder-Ease will appoint district managers for each area, who will have as many assistants as conditions warrant. Hansen explained the area procedure as follows:

"As inquiries are received, they will be acknowledged promptly together with a statement that the prospect will be contacted within a short period. After the contact has been made and the various aspects of the business explained fully, the area manager will approve or disapprove the location for a store. If approved, a contract will be signed and orders taken for Launderalls and other necessary equipment."

"A sketch of the store will be forwarded to our main office where a complete store layout will be drawn up and returned to the operator, together with detailed drawings, blueprints, and specifications for the construction of the store. There will be a \$25 charge for this architectural service, for which others are said to charge as much as \$300. A 'Launder-Ease' emblem for use outside the store, together with placards, advertising, and other necessary material will also be provided at cost."

The Launder-Ease Corp.'s services include assisting the operator in obtaining bids for the construction of the store, helping him in publicity and advertising and assisting him in the operation of the self-service laundry as long as it is wanted and needed.

In addition to Hansen, officers of the Launder-Ease Sales Corp. are: Edwin O. Butler, vice president; W. E. Hansen, treasurer; and William Walzer, secretary.

THE PERFECT VENTILATOR FOR HOME AND OFFICE

A dominant reason for the wide dealer acceptance of WINDO-AIRE is its profit factor—so highly significant in today's competitive market.

But there is more than that to the "success story" of WINDO-AIRE! WINDO-AIRE is easier to sell. Merely showing it reveals those extra features that point up a better ventilating job.

Small wonder, therefore, top-flight Dealers from coast-to-coast are flocking to WINDO-AIRE—the window ventilator with the proved record of performance.

GET THE FACTS TODAY ON WINDO-AIRE!

LANGTOT
INCORPORATED

32 EAST 4TH STREET, NEW YORK 3, N. Y.

THIS FINNED TUBE CAN TAKE IT



....because the fins are integral with the tube itself!

Time and time again Wolverine Trufin has been exposed to extremely high heat. It has withstood sudden temperature changes in heat exchangers. It has operated efficiently under all kinds of vibration. In every case it has "taken it like a champ"—ready for more.

Designers, engineers, production men who know it, specify it. They recognize the economy its use represents in the "extra performance" it delivers—all because the fins are a part of the tube itself. Heat transfer is quick and sure. Trufin is unaffected by vibration.

If you don't know about Trufin, better ask us to send you some charts and other technical information.

WOLVERINE TUBE DIVISION
CALUMET & HECLA CONSOLIDATED COPPER COMPANY

MANUFACTURERS OF SEAMLESS COPPER & BRASS TUBING

1411 CENTRAL AVENUE • DETROIT 9, MICHIGAN



Field Report

One of the News' most popular prewar features, the newly-resumed "Field Report" prepared by the editors and staff correspondents, will continue to report what distributors, dealers, and service contractors are finding out about the market, effective promotion, prices, service charges, etc.

Says Chain's Sales Manager:

'Convenience' Story Much the Better For Home Freezer Prospects Who Live In City

By George M. Hanning

DETROIT—Convenience and better living, rather than economy, is the story that will sell home freezers, according to C. L. Sivyer, major appliance sales manager for Grinnell Bros. Music House here.

That is the gospel he has been preaching to appliance salesmen in the company's 33 stores scattered throughout the state of Michigan, in Toledo, Ohio, and in Windsor, Ontario.

As an example of the results attained, he pointed with pride to the Jackson, Mich. store where no freezers at all had been sold before he introduced the convenience and better living theme a few months ago. Since that time the store had sold three freezers.

"That's not very many," Sivyer admitted, "but it is a start. It is better than not selling any."

The convenience of having a freezer at one's finger tips, stocked with a wide variety of foods, is the main advantage of freezer ownership, he believes. A freezer owner and user himself, Sivyer gets a kick out of telling how, when a large group of people drops in unexpectedly at meal time, his wife can get from their freezer and prepare in 20 minutes enough food to handle the crowd. "We can even offer them a choice of what they want to eat," he enthused.

"We never have left overs. Our Thanksgiving turkey disappeared into the freezer right after dinner. Even the bones were picked and the scraps made into turkey ala king."

Doesn't Stress Economy

It is a mistake to emphasize the economy angle, Sivyer believes. "I wouldn't recommend that anyone buy a freezer just so he can freeze his own food and keep a year's supply on hand," he declared.

"I don't think that frozen foods should normally be kept more than 60 days. It isn't necessary. However, there are exceptions. We still have in our freezer some cuts of the deer I shot last year."

He also said that he would not recommend that anyone plant a garden just to stock the freezer. It is much better, he thinks, to eat the food from the garden while it is fresh. If there is any surplus, naturally it can be frozen and stored in the freezer, he added.

Doesn't Stress Freezing

Despite what some salesmen will say, home freezers are not meant for freezing in quantity, he indicated. They are meant for storage. The place to have meats or vegetables frozen is in the locker plant. Then they can be stored in the freezer if desired.

"Why should a freezer owner go to the bother of freezing fruits, vegetables, and meats when he can buy the best already frozen?" he asked. "The commercially packed frozen foods are processed while they are in their prime."

"Take peas for instance. The best peas available are grown in Washington state. Commercial packers get them right after they are harvested and process and freeze them right there in Washington. How can the home freezer owner get any better peas than those?"

On Processing Meats

"Or take meat. Meat packers know when meat is at its prime. Meat in its prime condition can be purchased, cut, and processed in a locker plant much better than the freezer owner can do it himself. So why should he?"

Of course, he pointed out, the farmer and the game hunter have special uses for a freezer. But the regular city families, among whom he thinks the bulk of freezer cus-

he is very proud of it.

"I took my old 10-cu. ft. Monitor Top G-E refrigerator and turned it on its back so that the door is on top," he recalled. "I removed the monitor top and installed a $\frac{1}{2}$ -hp. condensing unit. I set the entire box on a 2 x 8 in. platform.

"I'm no engineer, but I heard somewhere that the proper ratio for a freezer was 6 ft. of coil to every cubic foot of storage space. I got hold of 110 ft. of coil and made a box type evaporator in the center of the cabinet.

"I figured that if 60 ft. of coil would be required, 110 ft. would do the job that much better. And it worked fine. It holds the storage space around the outside of the evaporator at 0° F. and the area within the coils at -25° F., enough for a little freezing.

"In those old refrigerators they had about 4 in. of insulation, plenty to hold in the cold at lower temperatures."

8-cu. ft. Size Best?

Sivyer chuckled when his own freezer was mentioned. He made it himself years ago when regular freezers were hard to get. And

on the basis of his own experience with this box, he believes that the average city family will find all its needs filled by an 8-cu. ft. freezer.

Also, he stated, the place to put a freezer is in the kitchen. However, the modern kitchen is not able to accommodate it. If he were building, he indicated, he would construct his kitchen to accommodate the freezer.

Selling home freezers, he declared, is just like selling refrigerators was 14 years ago. It takes a lot of educational work on the part of salesmen.

Tell Story to Everybody

"I have instructed our salesmen to talk home freezers to everybody who will stand still long enough to listen," he stated.

"We do that with all new products that haven't yet received wide public approval. Our idea is that if the public keeps hearing about home freezers, automatic washers and ironers, and other new items from Grinnell salesmen, they will naturally turn to Grinnell's when they are ready to buy.

"It worked with refrigerators and I am sure that it will work with home freezers."

All Home Furnishings Sales 32% Over '46

CHICAGO—Sales and production volume in the home furnishing field is reaching an all-time high this year, and "neither manufacturers nor distributors of home goods see any possibility of supply overtaking demand in 1948," according to Lawrence W. Whiting, president of the American Furniture Mart.

He pointed out that manufacturers' sales are running 32% ahead of 1946, which was 44% ahead of the previous year. An increase of 20.6% has been noted on wholesale volume, while the retail increase only amounted to 15%, Whiting added.

Coulombe Purchases Farmington Outlet

FARMINGTON, N. H.—The electric appliance business operated by George R. Gray for several years in the Gray Block on North Main St. has been purchased by Harvey A. Coulombe, local president.

"Eye Appeal"—another important sales-stimulating Harvester Feature

"It's truly beautiful!" That's what women say about the smooth, flowing lines; gleaming, lustrous finish, and handsome hardware of the 11-cubic-foot International Harvester Freezer.

Snowy-white enamel inside and out . . . a big, full-size lid providing easy access and a full-view of the roomy interior . . . a smartly-designed, chromium plated handle that fits the hand comfortably, works easily, closes securely. Those are things that women who use this freezer talk about.

Here are advantages your salesmen, too, can talk about . . . they're features that make sales . . . examples of careful, skillful International Harvester designing and engineering . . . of product leadership that opens up bright new sales and profit opportunities for International Harvester Refrigeration dealers.

They go beyond the six basic selling

features of all International Harvester freezers:

1. Floating Lid—2. All-Steel Construction—
3. Comfortable Toe-Space—4. Hermetically Sealed Unit—5. Hermetically Sealed Insulation
- 6. Dulux Finish over Bonderite

And remember . . . with a product second to none, International Harvester Refrigeration dealers have the solid backing of

- Powerful National Advertising
- Coast-to-Coast Distribution
- Effective Nationwide Service
- Great-Name Prestige

For information about open refrigeration territory, get in touch promptly with your nearest International Harvester branch.

INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue Chicago 1, Illinois

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INTERNATIONAL HARVESTER
Refrigeration
THE INTERNATIONAL HARVESTER SYSTEM OF FOOD PRESERVATION

October Sales Continue Upswing for Appliances In Knoxville District

KNOXVILLE, Tenn.—A continued upswing in sales of major appliances here during October was noted by the Knoxville Utilities Board.

Space heaters, as would be expected, jumped 50% over September in unit sales. Ironer sales rose 40%, water heater sales 25%, and range sales little over 10%.

On the other hand, only one more refrigerator was reported sold in October as were sold in September. Home freezer sales remained at the September level.

Though the report covered 43 local dealers as compared with 45 in September, total dollar volume increased \$20,000 to \$266,684.

The detailed report follows:

RESIDENTIAL SUMMARY

Appliances	No. of Units	Value
Home Freezers	19	\$ 7,613
Refrigerators	251	69,904
Ranges	250	62,493
Water Heaters	108	14,329
Other Major Appliances	24	2,802
Dishwashers	9	3,242
Waste Disposal Units	3	498
Washing Machines	349	54,401
Ironers	56	10,097
Space Heaters	305	11,866
Small Appliances	468	8,041
Lighting Equipment	125	1,827
Lamp Bulbs	1,165	1,876
Farm Pumps	10	1,675
Other Equipment	518	16,020
Total	3,660	\$266,684

Johnson Named Norge National Service Head



THURLO F. JOHNSON

* * *

DETROIT—Thurlo F. Johnson, central regional sales manager, has been named to the newly-created position of director of national service for the Norge division of Borg-Warner Corp., according to M. G. O'Hara, vice president and director of sales.

The entire service department is being expanded and the company is giving the same emphasis to service that it is to each of its manufacturing operations, it was stated.

Johnson was at one time national service manager.

Consumer Credit Hit New High as Reg. W Ended

WASHINGTON, D. C.—During its last month under Federal controls, October instalment credit increased by \$170 million dollars, just slightly more than the average monthly expansion for the preceding year, the Federal Reserve Board has announced.

At the end of October, the total instalment credit outstanding reached \$5,454 million as compared to \$6 billion just before Pearl Harbor.

Total consumer credit, including instalment credit, single payment loans, and charge accounts, went up \$379 million in October to hit a new high of \$12,050 million, the Board added.

Instalment credit on all items except automobiles—including refrigerators, washers, radios—increased \$71 million during the month to a \$1,324 million total.

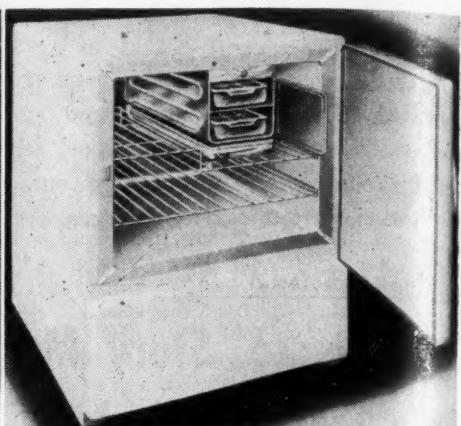
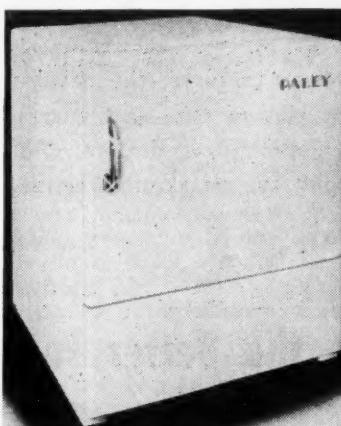
NERA To Shift Offices

To Chicago on January 1

CHICAGO—Headquarters of the National Electrical Retailers Association will move from Washington to Suite 1437 of the Merchandise Mart, Chicago on Jan. 1, according to C. C. Simpson, managing director of the association.

Simpson stated that the move is being made in order to better serve the nation's retailers of appliances and radios, since Chicago is a recognized center of the appliance industry and 85% of the electrical manufacturers are located in or near Chicago.

3½-Ft. Refrigerator Is Less Than 3-Ft. High



Householders with small kitchens may be prospects for this new refrigerator introduced by Paley Mfg. Co. of Brooklyn. Measuring only 3½ in. high, the cabinet is probably adaptable for counter or under-counter installations. Storage capacity is 3½ cu. ft.

'Lo-Boy' Introduced--

Adults Can Write Santa--

(Concluded from Page 1, Column 3) interior light automatically operated by a door button.

Condensing unit is a ½-hp. "Freon-12" hermetic, and is available for 50 cycle or 220-volt operation as well as the standard 110 volt, 60 cycle a.c. single phase current.

J

Exterior of the box is finished in polished, baked white enamel over rust proofed all-steel welded construction. The cabinet liner is of all-welded construction finished in vitreous enamel. A toe recess is also incorporated into the design of the box, which has a shipping weight of 231 lbs.

In explaining the plan to Rochester citizens, Columbia Music & Appliance Store management said:

"The hardest thing about Christmas shopping for adults is finding out what they want. You won't ask and they won't tell—that would spoil the fun. Children don't have this problem—they write a letter to Santa Claus, Mom and Dad sneak a look at it and the youngsters get what they want."

"We don't know why the same system can't work for grownups—and we've set up a free service to see that it does. Fill in the coupon, telling us just what you want and who you'd like to know about it. We'll drop that person a confidential note. We'll also keep your coupon on file here for others to look at. Come Christmas, you'll get the gift you want, instead of a gift somebody thinks you want and yet all the fun of being surprised is kept."

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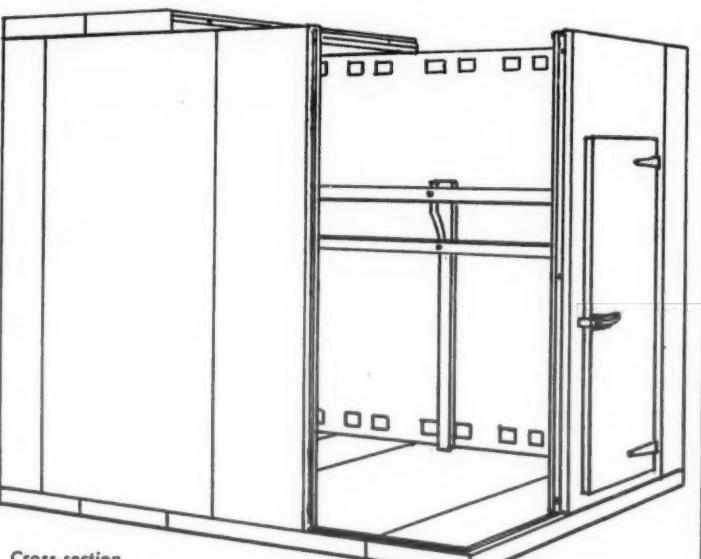
refrig

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Made for QUICK SET-UP

• Miracool sectional all-steel Walk-In Coolers are easily and quickly erected. By adding sections or re-arranging doors and walls, they can easily be enlarged or reconstructed.



Cross-section showing Miracool construction

• Miracool Walk-In Coolers for normal temperature are available with wood floor racks, quarter rails, shelves, and hooks for meats—or with wood floor racks only, for vegetables and beverages. They can also be supplied with doors for reach-in service, and equipped with meat storage accessories. Obtainable in 6 ft. 6 in. and 8 ft. 6 in. heights, in many width and length sizes, all with 4 in. insulation. Two rows double-headed rubber gaskets between sections.

Write for new illustrated folder and price list, including dual-temperature and florist coolers. Prompt delivery.

The CLEVELAND REFRIGERATOR CO.

2901 EAST 65th STREET • • • CLEVELAND 4, OHIO

Manufacturers of Custom-Built Refrigerators Over A Quarter Century



GOVERN AIR

PIONEERS in the manufacture of completely packaged AIR-CONDITIONERS*

Manufacturers of: Evaporative Condensers • Air Handling Units for Heating and Cooling • Unit Coolers for Refrigeration • Blast Coils for Heating and Cooling.

EXCELLENT DELIVERY

Recent increases in our production facilities enable us to make rapid delivery on most of our products.

For further information contact your Governor distributor or wholesaler or write direct.

GOVERN AIR CORPORATION
513 N. BLACKWELDER, P. O. BOX 1654
OKLAHOMA CITY, OKLA.

Chicago Commercial Salesmen Meet, Quiz Bosses on Policies

CHICAGO—Members of the Commercial Refrigeration Distributors Association of Chicago claimed to have once again done the "impossible" on the night of Nov. 25, when the dealers and distributors who handle national commercial refrigerator lines in this area were hosts to their salesmen in a second annual Friendship Meeting. Nearly 100 salesmen turned out for the occasion.

W. H. Sudekum, manager of Hussmann Refrigeration, Inc., and a member of the RDA board, acted as chairman. In his introductory remarks, he stressed the theme, "Know thy neighbor," and reminded his listeners that when the idea of bringing competing salesmen together under one roof was carried out last year, it was the first time in the history of the commercial refrigerator industry this had ever been done. He expressed the opinion that competitive conditions in the Chicago territory had been greatly improved thereby.

J. W. Krall, executive vice president of the Tyler Fixture Corp., was the principal speaker. Krall presented a "creed for salesmen" in which he emphasized the need for scrupulous honesty in dealing with customers, intelligent understanding of their problems and careful attention to goodwill.

"One of the chief reasons why America is the great and progressive nation it is," the speaker declared, "is the fact that inspired salesmanship has entered so prominently into its history."

The Pilgrim Fathers, he said, were primarily salesmen, and it took masterly salesmanship to bring them to a new and unfriendly land. The Revolution, he stated, was bogging down when Thomas Paine restored confidence in the ideal through his pamphlets. Down to the present day, Krall continued, every step of major importance in the progress of American industrial and economic development has stemmed from the brains and efforts of the men who sell.

Other speakers on the program included Frank E. Murphy, of McCray Refrigerator Co., recently elected president of the local association; George O'Donnell, district sales manager of C. V. Hill & Co.; Paul Sullivan, executive secretary of the Commercial Refrigerator Manufacturers Association; and Irving Shell, of Lee-Shell Co. An open forum, in which the salesmen guests were privileged to ask questions on their problems and the policies of their employers concluded the meeting.

Lay or Else!

Slow Egg-Laying Hens Would Be Placed In Frozen Storage

WASHINGTON, D. C.—An offer to buy up poor laying hens and hold them in frozen storage until next year, when the supply of poultry and red meat is expected to be smaller, was made recently by the Federal Government as a part of its program to conserve grain.

It is believed that this plan, whereby the Agriculture Department will buy up low-productivity hens from the processors who agree to pay the farmer a specified price for the poultry, would save approximately 30,000,000 bushels of grain in the next 11 months.

The frozen storage plan, which the government said was started at the request of organized poultrymen, will cut the country's egg-laying flock to approximately 400,000,000 heads by Jan. 1. This would result from the culling of 40,000,000 more hens from the flocks.

Poultry stored in this manner will be held for use of the armed forces, export, and sale through normal channels.

Southern Dealer Opens Field To Refrigerators, Freezers

TYLER TOWN, Miss.—Announcement was made that Rushing Radio & Refrigerator Service here is expanding its business in the refrigerator field, taking on the sale of refrigerators, home freezers and counters to the domestic and commercial trade.

Revolving Display In Made-to-Order Case Shows Refrigerated Bakery Items

DAYTON—One of the most unusual refrigerators ever built to step up food sales has been installed at Murphy's Bakery & Meat Market here, to promote the sale of refrigerated baked goods.

The refrigerated case is 8 ft. high and measures 3½ ft. on all four sides. From knee to above eye-level, the case is enclosed in Thermopane glass, which gives customers a clear view of the interior. In the center is mounted a 2-in. chromium metal rod, revolving vertically, with four levels of "shelving" formed by glass discs 3 ft. high supported by chromium pegs.

The vertical rod revolves slowly, bringing into sight a continuous parade of cream puffs, whipped cream cakes, stollens, pastries, tarts, etc. The unit is powered by a ½-hp. electric motor concealed in the bottom.

Refrigeration at 30° F. is provided

by a dome-type blower and coil unit, mounted in the upper rear of the case, where it is readily visible to passersby. Stocking the case is effected by means of a plate-glass door at the rear.

Because of the revolution of the display, which incidentally, is the first such ever installed in a refrigerated case in this area, customers get an opportunity to see two or three times as many varieties of refrigerated bakery products, according to T. M. Murphy, head of the organization. Sales have been approximately 45% better ever since the installation.

Mehring & Hanson Moves

ARLINGTON, Va.—Mehring & Hanson Co., formerly located at 12 H St., N.E., Washington, D. C., have recently moved to 1240 Jefferson Davis Highway here, according to a company announcement.

WAA Special-Purpose Gas Cylinders Offered

WASHINGTON, D. C.—About 100,000 surplus special purpose gas cylinders, in 60 sizes, are offered in a series of competitive bid sales now being conducted by War Assets Administration regional offices.

Most of the cylinders are high-pressure types originally designed for wartime use as life raft inflators and high altitude breathing devices. They are light in weight, very strong, and many are complete with valves.

In addition to their adaptability to many uses "as is," the cylinders offer a wide range of conversion possibilities, WAA said. They may be converted for use as pressure tanks for paint or insecticide sprayers, tire inflators, portable fuel tanks, chemical dispensers, and dispensers of charged water or whipping cream.

Included among the various types of cylinders, most of which are portable, are a quantity of air flasks tested for 3,000 to 5,000 lbs. p.s.i., in sizes of 4 and 6 cu. ft., good for permanent storage installations.

Root To Manage Southeast Whiting Freezer Sales

WHITING, Ill.—Aldert S. Root, formerly field secretary for the National Commercial Refrigerator Sales Association, has joined the Refrigeration Division of the Whiting Corp. as district sales manager for Whiting's line of home freezers.



A. S. Root

According to Howard Roberts, vice president in charge of Whiting's refrigeration division, Root will have charge of the southeastern area covering North Carolina, Georgia, and Virginia. Root is a native of Raleigh, N. C. and a graduate of the University of North Carolina, and during the war served three years as an executive officer on a U. S. Navy L.S.T.

WHY WAIT FOR '48?

Here's profit in Your pocket NOW.



JORDON

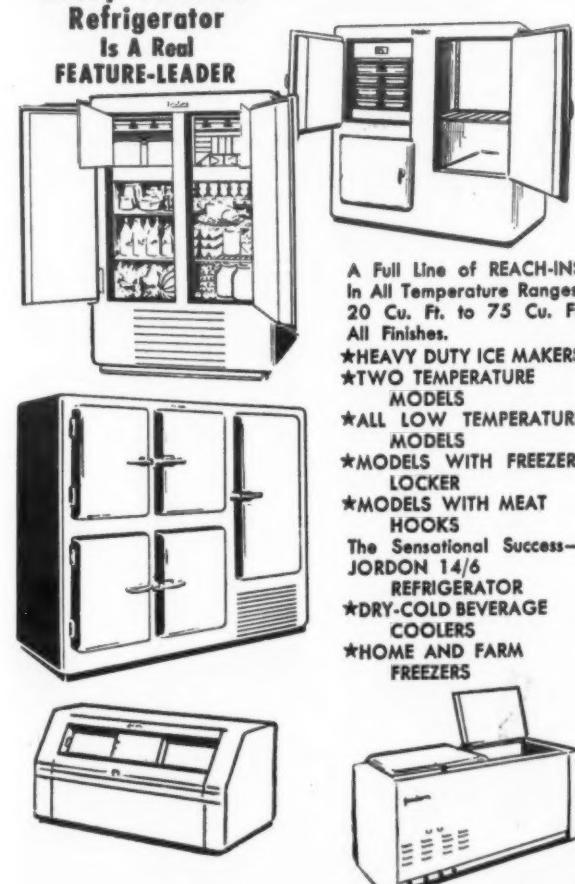
DISPLAY CASES

A WIDE CHOICE OF STYLES, SIZES AND FINISHES to Meet Every Store Requirement

National sales figures prove it—when you are a JORDON dealer you always have the right unit. And because JORDON has large, modern production facilities JORDON dealers can invariably make delivery when wanted. You can't beat a combination like that!

These handsome, de luxe quality display cases are only a part of the complete JORDON line now

ready and waiting to make profits for you. That is why we emphasize "Why Wait for '48?" There is a big backlog of unfilled orders for display cases. Surveys show that many thousands are needed. So why not get in touch with our sales department today—ask for catalogs and prices. We are ready to back you for profits in your pocket NOW.



Hotels Told Air Recovery Device Will Slash Cost of Operating Air Conditioning Systems

NEW YORK CITY — Savings in the operation of air conditioning systems under both winter and summer conditions, plus new advantages in odor control, may be realized in hotels through installation of an air recovery device making use of activated carbon, it is asserted in Research Report No. 15, published by the American Hotel Association.

Jake Fassett, director of American Hotel Association's service department, declares the report should prove valuable to hotels having central type systems or unit conditioners or where new installations are under consideration.

According to the report, both the initial and operating costs of any air conditioning installation are directly related to the amount of outdoor air required by the conditioned area for ventilation or dilution of air-borne impurities, but by the new purification method the requirement for outside air is kept to a minimum and costs thus reduced.

The AHA release emphasizes that activated carbon filtration adds nothing to the air and odorous gases and vapors are actually removed by the method. Impurities are eliminated from the recirculated indoor "conditioned" air, thereby decreasing the amount of outdoor "unconditioned" air which otherwise would be required, it is stated.

It was pointed out that estimated capital and operating expense for conditioning 1,000 cubic feet per minute of outdoor or ventilation air

is \$234 annually, while under the new method the cost approximates \$41.

"The inclusion of this development in existing air conditioning equipment is proving highly successful in the new railroad cars where it was found that, were it not for the activated carbon method of air recovery, it would be necessary to provide four additional tons of refrigerating capacity and a comparable increase in heating equipment to furnish the proper amount of ventilation air," the report states.

Research Report No. 15 can be obtained from the Service Department, American Hotel Association, 221 West 57th Street, New York 19.

Surface Combustion Corp. Opens New Dayton Office

DAYTON — Surface Combustion Corp. announces the opening of its new Dayton, Ohio headquarters at 238 Lafayette St.

Fred S. Hamer, formerly of the sales engineering department in the Columbus plant of the company, will be in charge of the new offices as district sales manager of the Space Heating Division.

Richard B. Thornburgh, former Janitrol district sales manager in Dayton, has been transferred to Columbus to take over the district management of the Columbus district sales territory.

Appliance Dealer Viate Is No 'Shrinking Violet' When Thieves Pay a Call

ROCHESTER, N. Y.—David Viate, electrical appliance dealer, has the type of ingenuity that never quits.

After a two-week series of burglaries had rifled his store of over \$1,500 worth of merchandise, Viate decided to take forceful countermeasures. He promptly set about hooking up a "home-made" alarm that consisted of a "black light," an "electric eye" beam, a microphone, a floodlight, and a trap door which made a draw bridge to the roof of an adjoining building.

Not many dark nights slipped by before a pair of burglars sprung the trap, which immediately floodlighted their escape route. Fully roused by this time, Viate shouted for them to stop. When they failed to he brought his gun into play, wounded one of the men, and killed the other.

Detective Chief Edward G. Collins said no charge would be placed against the dealer.

Albert Galt Joins Staff of Carrier Distributor In British Columbia

VANCOUVER, B. C., Canada—Albert Galt has joined the staff of the General Refrigeration Engineering Ltd., Vancouver. Galt has spent 20 years in the industrial, marine, and commercial refrigeration field. General Refrigeration Ltd., is distributor in British Columbia for Carrier refrigeration and air conditioning equipment.

Elite K. C. Restaurant Will Air Condition New Quarters

KANSAS CITY—The latest in air conditioning equipment will be installed in the New Yorker restaurant and cocktail lounge here when the elite downtown entertainment spot moves to its new location in the Bray hotel, 1114 Baltimore.

A \$100,000 remodeling program will begin about February when the new owner secures possession of the hotel, and after modern facilities are installed, including the year-round air conditioning equipment, the structure will be renamed the New Yorker hotel, taking its designation from the restaurant which will occupy the street floor. James Pusateri will assume the management of the 90-room 9-story hotel as well as the restaurant and bar.

The restaurant will be larger than the present Pusateri's New Yorker at 1104 Baltimore, and will seat about 100 persons.

Rieger Appointed Manager Of G-E Heating, Fan Divs.

BRIDGEPORT, Conn.—Charles K. Rieger has been appointed manager of the General Electric Co.'s heating device and fan divisions, it has been announced by H. L. Andrews, vice president and general manager of the G-E Appliance & Merchandise Department. He succeeds the late Marshall B. Ross.

Formerly commercial engineer of the company's home laundry equipment division, Mr. Rieger was graduated from the University of Missouri in 1936.

Air Conditioning at UN Expanded by Addition Of 23 Typhoon Units

NEW YORK CITY—Expanded air conditioning of the United Nations buildings at Lake Success has been achieved by the addition of 23 Typhoon console-type units supplied by the Typhoon Air Conditioning Co. of Brooklyn.

Installation, totaling 140 tons of refrigeration capacity, was made by contractor Harold J. Ryan, Inc.

The Typhoon units are being utilized in connection with a central system which was already in existence on the United Nations premises. Chilled water was pumped into the coils to adapt these units to existing facilities.

Because of the large area and varied loads involved, the space was broken down into zones, and units were placed so as to serve each zone efficiently. The cabinet-type finish featured by Typhoon is said to blend with United Nations surroundings.

ASRE Brochure Covers Data on 2 Common Brines

NEW YORK CITY—The two common refrigeration brines, calcium chloride and sodium chloride (salt), are authoritatively discussed in an Application Data Section recently published by The American Society of Refrigerating Engineers.

The five page brochure was written by R. H. Sawens, director of technical service, The Soltex Process Co.

Designated Application Data 40, the brochure presents in non-technical language the properties, preparation, and corrosion characteristics, of these two widely used brines. In addition, the AD discusses corrosion inhibitors, brine testing, and the correction for acidity or alkalinity. It may be obtained from ASRE headquarters, 40 W. 40th St., New York City, for 30 cents a copy.

Aircon Air Conditioning Co. Incorporates In Houston

AUSTIN, Texas — Secretary of State here has announced the incorporation in Texas of the Aircon Air Conditioning Co. of Houston. The company was chartered by Leo B. Rosenweig, Tilden H. Edwards, and Melvin S. Cohn.

Refrigerated AIR CONDITIONING That Can Be INSTALLED WITHOUT "WRECKING THE PLACE"

The most modern air conditioning system ... now on the market! Lower initial cost and from 25% to 40% lower installation cost! No expensive alterations of masonry, walls or ceilings! Can be placed in any spot ... not necessary to be near a window. That's the BIG selling point for the new ...



The attractive unit (in walnut grain, blonde mahogany or white porcelain) will cool and dehumidify and can be placed anywhere in a home, office, hospital, tourist court, hotel. The compressor (extra) can be placed in attic, basement or closet, and is connected to the unit by an easily installed, inexpensive copper tube. Small, movable, beautiful as "furniture." Fully automatic, triple thermostatic control. Increased compressor capacity makes commercial sales up to fifty units very easy. Order your stock NOW

JOCKER and DEALER FRANCHISES NOW AVAILABLE

This item is BRAND new! WRITE or WIRE for franchise territories, terms and quantity discounts ...



SPECIFICATIONS that Sell!

- COMPACT. 27" high, 22" wide, 10" deep.
- CAPACITY. 12,000 BTU per hour cooling capacity. 2 Rotary Blowers with 500 CFM.
- REFRIGERATED. With Freon.
- FILTERS AND DEHUMIDIFIES. Fiberglass filters.
- ENGINEERED. To cool conveniently a 25' x 30' room, 8' ceiling, under normal occupancy conditions.
- SMART. Choice of walnut, mahogany or white finishes. Special finished on quantity orders.
- MODERN CONTROLS. Each unit equipped with Expansion valve, Solenoid and Thermostat—TRIPLE control. Three-speed volume switch.
- MOVABILITY. The copper tubing from compressor to unit is as easy to install as wire, and easy to move. Apartments or hotels can offer CHOICE of air conditioning. Lessees can install and later move without losing equity in unit.

Remember, CONDITIONair fits ANYWHERE. Stock CONDITIONair Now . . . for greater sales and profits in Modern Air Conditioning.

Cable Address "INTIME"

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Also Manufacturers of Evaporative Coolers. All Sizes Now Available.



CUPRO NICKEL FINNED TUBES FOR SALE

Immediate Del. From Our Stock
Tubes $\frac{3}{8}$ " OD, 18 ga. (.049"),
Navy Spec. 46-9B, in 2 lgths 68"
& 86". Mfg. by Revere Copper &
Brass. Copper fins, spiral wound,
then tinned, fins .020" thick, $\frac{1}{8}$ "
apart, $\frac{1}{8}$ " OD.

Condenser Serv. & Eng. Co., Inc.
95 RIVER ST., HOBOKEN, N. J.

KRACK
ENGINEERED
UNIT COOLERS
FIN COILS
AIR CONDITIONING
Refrigeration Appliances, Inc.
923 W. Lake St., Chicago 7, Ill.

Varied Program To Mark ASRE Meeting-- New York's 214 Locker Plants Draw Most Patrons from Farms, Survey Shows

(Concluded from Page 1)

Variety is the dominant note in the 12 technical papers which are on the program for the four technical sessions to be held during the three-day meeting. Marine refrigeration, greenhouse air conditioning, various aspects of quick freezing, and developments in the dairy industry are among the topics to be discussed.

Complete program for the meeting follows:

SUNDAY, DEC. 7

12 noon—Advance registration, finance committee meeting, constitution committee meeting.

1 p.m.—Sections committee luncheon-meeting, executive committee meeting.

5:30 p.m.—Reception, Philadelphia section, host.

7 p.m.—Council dinner-meeting.

MONDAY, DEC. 8

9 a.m.—Advance registration.

10 a.m.—First technical session, President Roland H. Money presiding.

"Graphical Aids to the Solution of Ammonia Absorption Systems Problems," A. B. Stickney, Armour & Co. "Technical Factors In Greenhouse Air Conditioning," Dr. L. C. Marshall, University of California, Berkeley.

"Modern Handling Methods In Refrigerated Storage," P. B. Christensen and D. O. Haynes, Merchants Refrigerating Co., New York City.

1 p.m.—Welcome luncheon.

2:30 p.m.—Committee meetings: awards, membership, standards, research.

4:30 p.m.—Committee meetings: education, program, general technical, admissions.

9 p.m.—Beer and skittles party.

TUESDAY, DEC. 9

9:30 a.m.—Second technical session, Vice President Clifford F. Holske presiding.

"Refrigeration Developments In the Dairy Industry," Dr. R. J. Ramsey, Ramsey Laboratories, Cleveland.

"Refrigerated Storage of Edible Nuts," C. T. Baker, Atlanta.

"Mechanical Developments In Marine Refrigeration," S. W. Brown, Carrier Corp., New York City.

12 noon—Publications committee luncheon-meeting, group luncheons.

1 p.m.—Women's luncheon and entertainment.

2 p.m.—Third technical session, Vice President B. H. Jennings presiding.

"Quick Freezing Theories Exposed to the Polarizing Petrographic Microscope," J. M. Lebeaux, University of Texas, Austin, Tex.

"Quality Characteristics of Beef In

Freezer Storage for 40 Years," J. M. Ramsbottom et al., Swift & Co.

"Fish Freezing at Sea," J. M. Lemon and C. B. Carlson, Fish and Wildlife Service, U. S. Department of Interior, Washington, D. C.

7 p.m.—Annual cocktail party and dinner-dance.

WEDNESDAY, DEC. 10

10 a.m.—Fourth technical session, Treasurer Paul B. Christensen presiding.

"Applications of Refrigeration to Concrete Dams," C. Rawhouser, Bureau of Reclamation, U. S. Dept. of Interior, Denver.

"Desirable Characteristics of Refrigeration Desiccants and Methods of Testing," Dr. P. L. Veltman and C. E. Waring, Davison Chemical Co., Baltimore, Md.

"Choice of Refrigerants for the Centrifugal Compressor," O. E. Gammill, Jr., Carrier Corp., Syracuse.

12:30 p.m.—Induction of new officers.

1 p.m.—Council luncheon-meeting.

ITHACA, N. Y.—How much the frozen food locker industry in New York state is centered in the rural areas is shown in a study just completed of locker plants in operation in New York last year.

The study, made by Edward H. Piper of the Department of Agricultural Economics at Cornell University under the direction of Prof. L. B. Darrah, was based on a survey of 107 plants, half of those operating in the state.

According to his figures, two thirds of the renters of the more than 115,000 lockers in New York live on farms, and approximately half of the plants are located in towns of less than 5,000 population.

"The locker industry has developed rapidly in New York since it was started in the 1930's," Piper related. "In 1938, only 12 plants were in operation while the latest available figures show 214 plants."

At first the plants were concentrated in the fruit belt along Lake Ontario but now they are dotted around the state.

One of the most noticeable trends in the industry which the farm economist cited is the large increase in the number and per cent of locker plants not connected with other businesses. "More and more plants," he said, "are becoming separate units."

The connections most frequently found in 1946 were with retail stores, and cold storage and ice manufacturing plants were next.

Some of the results of the survey offer an idea of what goes on in the locker plants. Eighty per cent of them provide cutting, wrapping, and freezing services while 75% sell frozen foods. The amount of food processed per locker averaged 353 pounds a year with beef accounting for about half of it and pork for one-

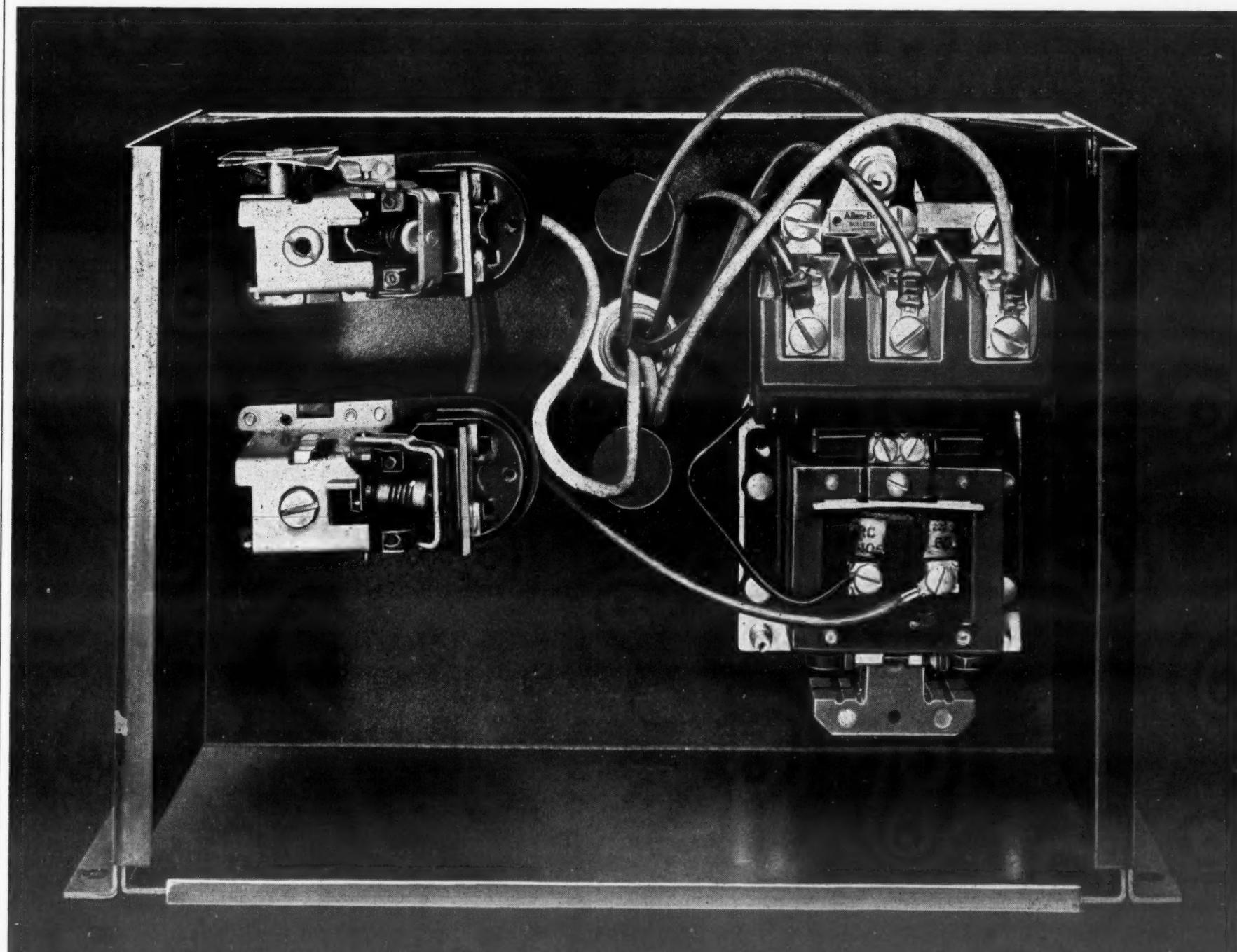
fourth. Fruit and vegetables were 10% of the total and poultry, another 10%.

As for the dollars and cents part of the business, the typical investment was \$35,000 with nearly equal amounts in land and buildings, and equipment. It represented \$60 a locker and the plants average 621 lockers.

The figures also indicated that plants received 90% of their receipts from rentals and service while they paid out 46% of their operating expenses for salaries and wages.

"Whether the locker plants pay," Piper concluded from his results, "depends on the size of the business (the ones with 580 lockers or more were the most profitable), rental income rates and labor efficiency." The plants which made the best use of labor, he pointed out, were those that had a large volume of food to be processed.

Piper made the study to show the growth and development of locker plants in New York, to describe their operation, and to determine the importance of processing services and some of the factors affecting net operating income.



It costs less to install a fully wired Supermetc

You eliminate the extra expense involved in "hooking up" electrical control mechanisms when you install Servel Supermetics. These up-to-date condensing units come completely connected, fully wired, ready to run.

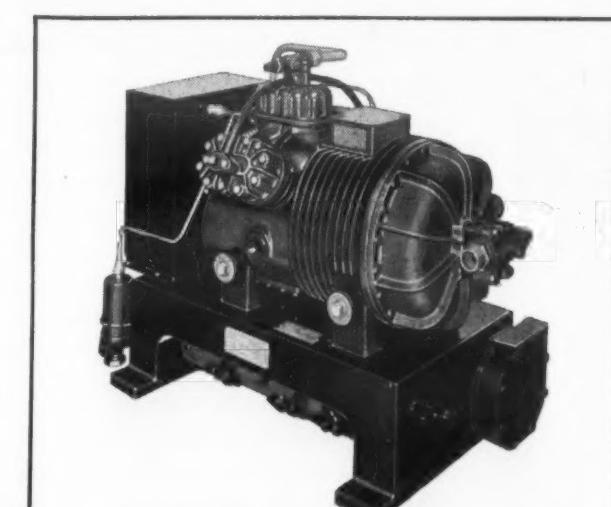
Housed in a compact, easily accessible control box mounted on the end of the unit base are a dual pressure control and magnetic starting switch, connected through the motor overload protectors. All you do is connect the electrical circuit, tubing lines, and, with water-cooled units, the water supply and drain.

This faster, easier installation is just

one more of the many advantages offered by Servel Supermetc. Figure out today's field labor costs and see for yourself the substantial savings you make when you specify a "fully wired" Supermetc.

Servel's four- and six-cylinder Supermetics are available in size from 1 HP through 3 HP. Smaller models range from $\frac{1}{4}$ through $\frac{3}{4}$ HP. It's the most complete line available today.

Write for your free copy of a new folder describing "ready-to-run" Supermetics. Address Servel, Inc., Division RN, Evansville 20, Indiana.



Servel Supermetc Model WH6R, a compact, sturdy unit for the larger applications.

1. STORE FIXTURES
2. MILK COOLERS
3. HOME LOCKERS
4. BEVERAGE COOLERS
5. VENDING MACHINES
6. ROOM COOLERS
7. FARM FREEZERS
8. WATER COOLERS
9. INDUSTRIAL COOLING
10. VEHICLE REFRIGERATION

Servel SUPERMETC

Bowen
REFRIGERATION SUPPLIES, INC.
Atlanta Jacksonville
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"The South's Largest Refrigeration Supply Jobber"

Superior
VALVES, FITTINGS and ACCESSORIES For All Refrigeration and Air Conditioning Systems
Superior Valve and Fittings Co. PITTSBURGH 26, PENNA.

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from preceding page)

Let's Be Realistic

To be sure, *dares* should take stock of their assets before climbing out on a limb. They should note that human reactions are infinitely more complex and less predictable than are textbook descriptions or market studies. They should understand that compulsory discipline never rouses eager and spontaneous cooperation. The urge to achieve must come from *within* a person or from a team of like-minded pilgrims. It can't be imposed by force upon a reluctant populace without forfeiting the workmen's desire to do more than seems necessary.

Progress is self-impelled and self-starting. Its roots grow only in the rich alluvium of self-indulgence, self-interest—yes, and self-abnegation.

The prim schoolteacher and the horny-handed foreman—who preach asceticism and classicism and who insist that their pupils do as they have done (or failed to do)—rigidly stifle incipient genius; whereas friendly encouragement and cooperation on the part of tolerant managers often may fertilize the soil from which the seed of genius can spring up and flower.

That's a long sentence, but it should be re-read and pondered. There's more to it than meets the casual eye. Romanticism fosters teamwork. Classicism fosters resentment.

Patriotism Has a Real Meaning

The United States of America was conceived in its glorious entirety by uninhibited Romanticists. Its founders were young men who dreamed dreams, saw visions, and were reckless. ("Indeed," as Benjamin Franklin warned the signers of the Declaration of Independence, "we shall all hang together, or we shall all hang separately"). They all hung together; thereafter Romantic America was born, seeded, blessed, impregnated, and smiled upon by the Gods of Fortune.

No more romantic and exciting story has ever been told than this: Five American Presidents were born in log cabins; another quintet of American Presidents grew up on lonely farms. Abraham Lincoln worked out his arithmetic on the back of a shovel. Andrew Jackson didn't learn how to read or write until he was past voting age. Harry Truman was a bankrupt haberdasher. Three American presidents were sons of mechanics, and another trio was sired by small-town preachers.

America's romantic rags-to-riches tradition includes the Three Charlie Wilsons (who are today the respective presidents of General Motors, General Electric, and Worthington.) All three rose from the ranks. (G-E's Charlie Wilson started out as an office boy, for example) to attain tremendous power-and-place.

How could three unheralded, obscure, unsponsored boys named Charlie Wilson rise to unchallenged eminence in the American industrial hierarchy almost simultaneously? Well, we'll try to explain this phenomenon. Here goes:

Under the American System, these go-getting lads weren't tradition-bound, nor were their destinies dictated by parents and in-laws. Their careers weren't stultified by Classic rules and "don'ts." They didn't have to buck European or Asiatic titles of nobility, rank and caste, in their quest to "get ahead." They could take advantage of America's free-for-all schools and libraries. And they flourished under a "get-ahead" political atmosphere which was epitomized by the McGuffey Readers and the inspirational "penny dreadfuls" written by Horatio Alger.

In brief, they were *on their own*, and they made the most of their opportunities.

Let's Count Our Many Blessings

America's unbelievably grandiose rags-to-riches tradition is not confined to individual "success stories" like the three Charlie Wilsons, how-

ever. All American citizens have benefitted from our nation's intuitive spurning of Classicism.

We have more homes, farms, automobiles, telephones, refrigerators, radios, bathtubs, schools, insurance policies, bank depositors and stockholders, etc., etc., etc., than all the rest of the world put together.

We've made the Pursuit of Happiness realizable and attainable. (Put that in your pipe and smoke it: Mr. Classicist.)

And most American citizens are happy and prosperous.

We're In STYLE

Romanticists periodically become fashionable. (And that thought should be a comfort to modern individualists). Christ and his Disciples, Spinoza, Columbus, The Renaissance, the two Bacons, the frenetic forerunners of the French Revolution and the Magna Charta . . . all these enlightening harbingers of human advancement were spearheaded and spurred on by rule-hating, selflessly daring Romanticists. The far-seeing imagination of these rugged individualists, and their defiance of entrenched rigidity, payed off handsomely for future generations. Let's examine the record:

In the United States of America we have demonstrated that Romanticists, when given a chance, can translate confusion into Happiness, and mishaps into Opportunities for Service.

In consequence, we know that our mission, as true Americans, is that of convincing the rest of the world that it can grow and prosper and be happier if its discouraged citizens will adopt the concept of Romanticism, too. (In simple terms, that concept means: "give every man a chance to do what he wants to do, and to do his best.")

Let the Freedom-Bell Ring

What's the Matter with the World today?

Answer The Classicists are moving in again. Rules and regulations are crowding out genius and imagination. Common folk are beguiled by False Prophets into trading their real Opportunities for a promise of Impossible Security.

"Shorter Hours and More Money"—the battle-cry of our generation—is a slogan which is a *non-sequitor* in itself, and which checkmates higher standards of living when examined. Nevertheless, that slogan is cherished and loved. It's the root of nearly all of our contemporary Evils.

The Myth of the King, the Plantation-Slave philosophy, the surrender of freedom to discipline—these are the movements which (disguised and conceded under the subtle cloak of "something-for-nothing") threaten to return our brave world to another Dark Ages Period.

What can calm, unshoveable, unreconstructed individualists who cherish the principle of the Sanctity of Personal Rights do to combat these emotional waves?

That's a tough question. It can't be answered with a magic-wand gesture. But all of us—saints and sinners, Communists and Republicans—can vouch for the fact that *harder work* on our part—plus *tolerance*—comprise in their magnificent heterogeneity our chief hopes for the realization of peace, progress, and comfort during this hectic period of inhuman history.

You Can Say This Again

"Over-Emphasis on the need for security is dangerous, since there is no such thing as complete security in the world. Although in the early developmental years it is important to give a feeling of security to the child, from then on he must be taught not the mistaken notion that he is secure, but how to live in an insecure world."

"Actually it is a regressive tendency; a return to a more primitive and archaic social organization, which will inevitably lead to the same injustice, tyranny and suffering which have existed recently in Germany and Italy. In spite of this, many persons of the so-called intelligentsia wish to develop this type of organization, and cannot see what the consequences will be."—Dr. Karl Bowman, professor of psychiatry, University of California Medical School.

★ NUMBER TEN ★

Comforting the Public Servant, The Public Charge, and the Traveler

MODERNIZATION of public buildings is one of the prime aims of many municipal and state governments. The latter have money in the bank, and they intend to dress up and rehabilitate the edifices they operate.

Erection of new state and municipal buildings (such expenditures for new construction are often camouflaged under the guise of "war memorials") already is under way in many sections of the country.

What's more, local hospitals, post offices, courthouses, museums, libraries, city halls, and state capitols are all candidates for improvement. All such projects are potential customers for air conditioning.

Only a few public buildings have been air conditioned in the past. National, state, and municipal budgets couldn't provide for it. Times have changed, however. Bulging state and municipal bank accounts are already earmarked for the renovation and improvement of those offices occupied by the professional Public Servant, and the homes for public charges. Air conditioning can expect to claim a large part of these expenditures.

Of the nation's 8,000 state-and-local hospitals, for example, only a few are air conditioned at the present time. They all need air conditioning—why not sell it to them?

And as new hospitals are constructed, air conditioning should become an integral part of architects' plans. Over three hundred new federal hospitals are planned by the Veterans' Administration. And in the more progressive of our nation's small towns, responsible citizens are raising funds to build needed "little" hospitals rapidly. All of these new structures ought to be air conditioned.

Here's another angle the prospective dealer shouldn't overlook:

To keep step with transportation progress, municipal airports must install air conditioning in their terminal buildings. (Portable packaged units are already used for cabin cooling while airplanes are refueling. But the passengers chafe in the heat, and grow hot under the collar, while they wait inside the terminals.

Throughout the entire transportation field, as a matter of fact, air conditioning will become a strong contributor to passenger comfort. Competition between various modes of travel—air, bus, railways, and ships—will stimulate air conditioning installations in all passenger stations during future years.

All this adds up to an unprecedented opportunity for the specialty salesman and the specialty dealer.

Climb aboard the bandwagon!

{ This is one of a series of 26 advertisements dedicated to the progress of the entire air conditioning industry by }

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Refrigeration products bearing the Larkin insignia may be depended upon to function flawlessly. Originator of the patented Cross Fin Coil, Larkin also instills the same exacting quality in Humi-Temp Forced Convection Units — Bare Tube and Zinc Fused Steel Plate Coils — Instantaneous Water Coolers — Air Conditioning Units — Evaporative Condensers — and other mechanical facilities for efficient commercial and industrial refrigeration.



LARKIN COILS

519 MEMORIAL DRIVE • S.E.
ATLANTA • GEORGIA

**ONE Control
Do ALL That?**

The diagram illustrates a single control unit (PENN Series 270) connected to a 230V A.C. 1-PH. compressor motor and a 115V A.C. 1-PH. fan motor or solenoid valve. The control unit features a pressure gauge and a switch labeled "SERIES 270 CONTROL". The circuit includes two contactors labeled M1 and M2, and a solenoid valve. A 230V power source is connected to the compressor motor, and a 115V power source is connected to the fan motor or solenoid valve. The control unit also includes a low side pressure control mechanism.

Series 270 and 272 PENN "Single" Temperature or low side pressure controls. Also (not shown) Series 271 and 273 PENN "Dual" Controls which combine in one unit a temperature or low side pressure actuated mechanism and built-in high pressure safety cut-out.

Yes, there's practically no limit to the versatility of the PENN 270 Series Control—the first and only control that features a load-carrying, 2-pole switch.

It's efficient and practical in all types of conventional refrigeration and air conditioning jobs as well as many unusual applications not possible with ordinary single pole controls. The diagram above shows a suggested hookup for a 3-wire, 115 and 230 volt AC system. This installation, for example, might be a 230 volt AC single phase compressor motor and a 115 volt AC single phase fan motor, solenoid valve or other device to be operated simultaneously.

The PENN 270 Series also can be used to control simultaneously the operation of two single phase AC or DC motors. It can control poly-phase motors of 3 h.p. or under without line starters (where protection against single phasing is provided). It is a better and more economical method of controlling multiple refrigeration systems.

Learn more about this new, different and better control. Write **Penn Electric Switch Co., Goshen, Indiana**. In Canada: Penn Controls, Ltd., Toronto, Ontario. Export Division: 13 E. 40th Street, New York 16, U. S. A.

PEN



FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

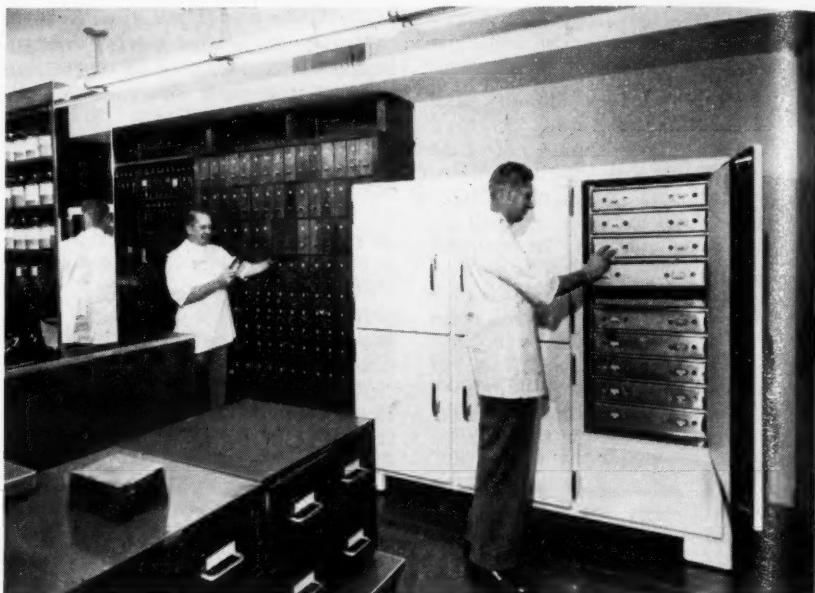
'Booster' Air Cooling Unit, Custom-Built Reach-In Refrigerator Makes Prescription Compounding Easier, Faster for Pharmacists

ST. LOUIS—A beautiful new store, incorporating complete refrigeration and air conditioning, together with many new innovations for both customers and employees, was opened recently in the center of St. Louis' medical district on Grandel Sq. by Hesselberg Drug Co., apothecary drugstore.

Featuring a parking lot large enough to accommodate 10 automobiles, air conditioned waiting room large enough to accommodate 40 people, prescription compounding counters constructed at various heights for the comfort of both tall and short pharmacists, and a separate air conditioned delivery room, the new store lays claim to being one of the modern prescription drug service institutions in the city.

Max Hesselberg, owner of the store, in setting up his new store, decided that year-round air conditioning at a controlled temperature to insure higher efficiency in drugs, to do away with errors, and keep pharmacists at peak working condition, was a "must" in the new pharmacy.

Thus air conditioning is provided in two ways—first by ducts tapping into the 50-ton remote air conditioning system of the Hanswer Memorial building in which the store is located, and by an extra booster 5-ton Chrysler package unit in the delivery room at the rear of the store. In extremely hot weather, the extra 5-ton unit, which incidentally is connected to the same ducts, is cut in. In this way,



The refrigerator was specially designed by J. J. Tenge, commercial dealer, to help pharmacists fill orders promptly, safely.



Air conditioned delivery room at rear has "booster" 5-ton Airtemp package unit for heavy load in summer months.

there is always a cool working temperature provided for the seven pharmacists on duty in the store, for the three employees in the delivery room which is partitioned-off at the rear, and for the waiting room.

Handling one of the city's largest volumes of vaccines, virus, and other biological drug products which required refrigeration at all times, Mr. Hesselberg called on the J. J. Tenge Co., St. Louis commercial Frigidaire dealer, to design a custom-made refrigerator for this purpose.

This special refrigerator contains five sections, with each compartment having from 4 to 6 stainless steel pullout drawers.

Since the refrigerator has been located behind the partition separating the service counter from the prescription department, pharmacists are no longer required to stop their compounding work to get these items.

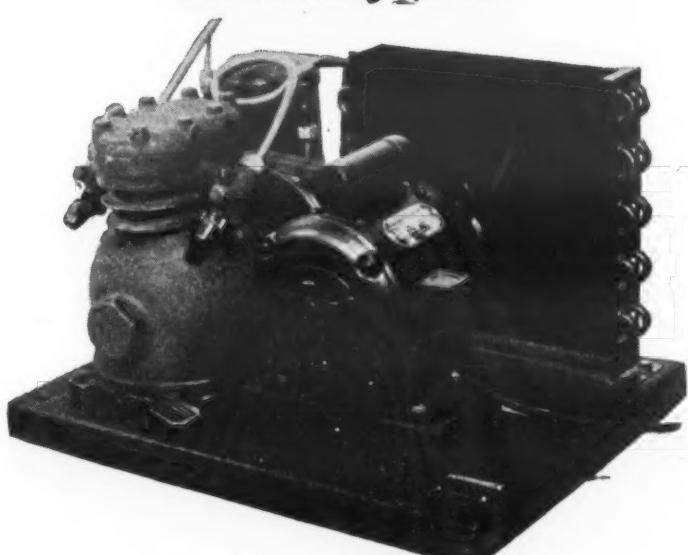
In addition to being relieved of

this responsibility of obtaining the refrigerated biologicals, many additional facilities have been included in the store to aid the pharmacists. These include three stainless steel sinks, one a 6-ft. model located at the rear of the store for extra-duty use, a typewriter table with a staff of girls to make out labels, and drug bottles lettered with permanent etching on the bottle instead of the usual paper or painted-on labels.

Prescriptions, after they have been filled by one of the seven pharmacists, are checked and packaged, after which they are labeled by one of the girl typists, and then given to a man in front who sends it through the front window where the customer picks it up when his name is called.

The blonde-oak waiting room is furnished with permanent, built-in blue leather divans, and flowers, magazines, and air conditioning to provide a pleasant atmosphere.

MULTI-COLD Condensing Units



COMPACT AND EFFICIENT

Now furnished in
1/6, 1/4, 1/3, 1/2, and 3/4 H.P. Sizes

Write for circular and information

MULTIPLEX MFG. CO. BERWICK, PA.

Advisory Committee Asks More Research by U. S. On Vegetable Marketing

WASHINGTON, D. C.—More emphasis during 1948-49 on research in marketing problems of vegetables in preference to research on production or utilization phases was recommended to the U. S. Department of Agriculture by the department's vegetable advisory committee recently.

The committee, through its chairman, Dean Stanley, vegetable producer and shipper of Phoenix, Ariz., expressed general approval of what has been done so far in the vegetable field under the research and marketing act and recommended that this work be carried through.

However, the nine man committee, which was appointed last March, asked that more prominent consideration be given to the following lines of work:

1. Improve the retail merchandising of fresh vegetables by encouraging retailers to use the latest and most efficient techniques, including proper methods of handling fresh produce in retail stores and suggest ways and means of stimulating consumer interest.

2. Preserve quality in pre-packaged vegetables through investigation as to where and when the pre-packaging should be done on various items of produce; how spoilage can be prevented; how quality, appearance, flavor, vitamin content, and food value can be preserved; what kinds of transparent films or other packaging materials are best for various products; what are the best methods for washing, trimming, refrigerating, shipping, handling, warehousing, and display.

3. Develop basic information as to the costs in connection with the merchandising of pre-packaged perishable products including preparation for packaging, storing, transporting, display, and merchandising.

This basic information should also include evaluation of consumer acceptance of pre-packaged fresh produce and assistance to producers, processors, and distributors in adopting efficient methods and procedures in the preparation and distribution of such products.

The committee also asked that advantage be taken of the authority granted by the research and marketing act to contract research, in cases where such research could be done quicker and at less cost than by the department.



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AIR CONDITIONING EQUIPMENT
Use
MANHATTAN V-BELTS*
They grip without slip.
They flex without overheating.
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They deliver the power that makes your equipment DEPENDABLE.
RAYBESTOS-MANHATTAN, Inc.
"Keep Ahead with Manhattan"
MANHATTAN RUBBER DIVISION, PASSAIC, N.J.

Baker's Delight Refrigerated Show Case Keeps Cakes Perfectly For Ten Days or More

LYNN, Mass.—Space for more than 100 refrigerated cakes is provided by a new refrigerated display case installed at Klemm's Bakery here.

Divided into three sections, the refrigerated case consists of a large bin at the bottom for undecorated cakes held in reserve, and four levels of shelving behind panel-type glass doors at the top.

Special order cakes are held for customers in the sanitary, all-white display case, and cause much comment from customers. Cakes may be held for 10 days or more with perfect flavor and appearance, according to Roland Klemm, head of the bakery.

To back up the huge retail cake display, the bakery has also installed a large walk-in refrigerator, and a low temperature unit.

Ending Antiquated Price Discount Systems Seen As One Way To Cut Distribution Costs

NEWARK, N. J.—Elimination of some cumbersome price discount systems plus intensified sales effort and improved packaging were among the principal means suggested here recently to combat high distribution costs in industrial equipment.

Approximately 250 members of two groups, the American Supply & Machinery Manufacturers Association and the National Supply & Machinery Distributors Association, met at the Robert Treat hotel to launch an attack on current inflationary costs of operation.

By standardizing their methods of quoting price discounts, manufacturers can get away from the antiquated system of multiple discounts, said R. H. Russell, treasurer of J. Russell & Co.

Such a change, he pointed out, would give the salesman more time to concentrate on selling and preclude the necessity for a complicated dis-

count system akin to "higher mathematics." "Let's eliminate this hocus-pocus of list prices . . ." Russell urged.

A personal review of their operating costs will show distributors where internal handling expenses eat up profits on small items, he further declared. In this respect it is not always necessary to hire an industrial engineer to make the time-study. A united appeal by distributors, Russell continued, should demand immediate improvements in pricing and packaging by the producers.

Details of how better packaging could save time were explained in a paper prepared by W. W. French, advertising manager of Dodge Mfg. Co.

In addition to packaging, W. W. Kemphert, of Worthington Pump & Machinery Corp., listed better selling, better customer service, and better personnel selection as the surest

means of reducing the expense of distribution. The need for these improvements was underscored by Kemphert's statement that the "easy selling methods of the last six years are over" and "purchasing agents are not just rubber stamps any more."

To implement the cost-reduction program outlined by Kemphert, R. Kennedy Hanson, general manager of the manufacturers' group (also executive secretary of REMA) drew attention to four booklets being distributed to members of the former association, as well as a few other "qualified" manufacturers.

Stepping up sales effort was also mentioned in a talk before the joint conference by Paul W. Evans, secretary of Meals, McCarthy & Rogers, Inc. "The days of friendship and teacup selling is over," he said, adding that the entertainment of prospects no longer was the most effective means of clinching a sale. He exhorted distributors to "get out of their rut" and show industrial buyers how industrial products aid production. In this respect manufacturers could help distributors, it was pointed out.

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RAYBESTOS-MANHATTAN, Inc.
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The Koch Reach-In 25 Cu. ft. refrigerator is now available with or without the ice-maker.

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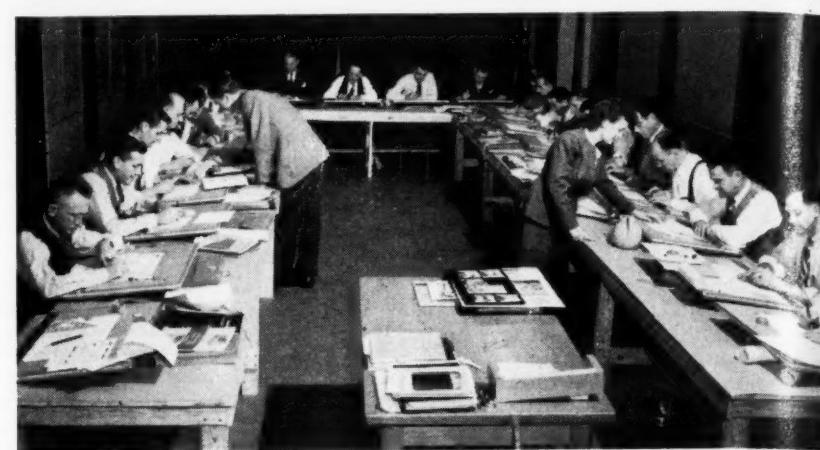
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GENERAL office work—Some typing. Good
salary and hours. Triangle Supply Co.
1923 S. Michigan.GROCERY clerk—Man or woman.
P.M. good salary, open to experience.
MARCH 1258 W. Madison.GROCERY clerk—Man or woman.
Good salary. 67-68 W. Madison.WEEK DATES 8-30-5
SATURDAYS 8-30-12-30
GENERAL office work—Some typing. Good
salary and hours. Triangle Supply Co.
1923 S. Michigan.GROCERY clerk—Man or woman.
Good salary. 67-68 W. Madison.GROCERY clerk—Man or woman.
Good salary. 67-68 W. Madison.**School Helps Dealers Adapt Elements Of Kitchen Planning To Homemaker's Needs**

CHICAGO — Emphasizing the importance of properly integrated appliances built into "personalized," all-electric kitchens to attain two specific goals—increasing the business volume of dealers and distributors, and anticipating the needs of the intelligent homemaker, Hotpoint, Inc. has been conducting a series of kitchen planning schools for its dealers and distributors.

This year's sessions of one week each have been designed to amplify the course which was held for the first time a year ago, according to L. C. Truesell, Hotpoint's vice president of marketing. The objectives of the school are to teach measuring and gathering of information, teach basic and advanced techniques of planning, and give instruction in the practical aspects of kitchen installations.

These sessions, the company pointed out, are much more comprehensive than the conventional, pep talk type of sales clinic. The program is under the direction of H. C. Doss, manager of kitchen sales, who described kitchen planning as the "science of kitchen arrangement, including functional design, fitted into the personality of the individual woman."

Arnold Butler, kitchen planning director who instructs the classes, is well aware that "you can't make an architect out of a dealer or distributor in a week's time." Butler be-



A group of dealers bend over drawing boards at the Hotpoint school where they receive instruction in kitchen layout and installation.

lieves, however, that he can give his "students" a working knowledge of the necessary elements for designing a functional kitchen that will cut lost motion to a minimum.

Class instruction also includes a number of refinements; it was planned for instance, to overcome a tendency to "forget the personal touches, such as color, that are necessary in kitchen arrangements."

The entire course is based on the premise that the ultimate success of a well designed kitchen can be determined by the whole-hearted endorsement of its principal occupant—the homemaker.

In order to satisfy the homemaker's specific needs, students attending the school are given instruction in basic perspective drawing with the aid of specially prepared instruction booklets.

Each student is provided with a drawing kit which includes a board, a triangle and the other instruments and data necessary for designing a complete kitchen. The course is amplified with slides, motion pictures and demonstrations by instructors.

Striving to make the courses as graphic and practical as possible, the kitchen planning department last week made available a line of plastic scale models of all appliances and cabinets used in Hotpoint's all-electric kitchen.

Tougher Problems Tackled

The students first are instructed in drawing a simple "L" shaped kitchen from a master drawing, with the help of the instructors. To this basic problem are added some of the more difficult considerations involved in designing a workable kitchen—radiator space, eating area, plumbing connections, lighting, wiring, and ventilation. Architectural changes, Butler instructs his students, are held to a minimum, but sometimes are essential.

Butler repeats the importance of

taking actual house measurements as the basis for kitchen layouts. It is fairly common, he warns his students, that dimensions taken from the architect's drawing will not coincide with the kitchen's dimensions because of building inaccuracies. This condition sometimes necessitates a complete revision of the kitchen plan, an eventually Butler prepares his students for.

Constantly stressing the personality of a kitchen, the course is designed to avoid a "cold, clinical" product. Butler shows his students how color schemes, wallpaper, mirrors and decorative details can make the kitchen personalized and homelike.

Hotpoint's kitchen planning instructors feel that a visual presentation for customers is essential. Since the average homemaker can not visualize a blueprint, there are two effective methods of presentation—miniatures in conjunction with photography, and the perspective sketch.

Good Planning Has 3 Steps

The course defines good kitchen planning in three steps:

1. Make a floor plan of the equipment arrangement.
2. Show in pictorial form how the finished kitchen will appear.
3. Order the equipment for installation.

The instructors point out that if the kitchen has been correctly planned step by step, a photograph of the finished installation will be almost identical to a picture of the miniature arrangement.

After the students have absorbed four days of instruction, they are put to work on a tangible problem at the final session. They are shown three walls of a dummy room from which they are asked to develop a complete kitchen.

This final problem is a tough one. It poses a combination of the most frequently encountered difficulties in

(Concluded on next page)

The STANDARD Reference Manual on REFRIGERATORS and FREEZERS

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Tabulating

For office or alertness portability the size 2 1/2" x 4" x 6" is

Working Out Actual Installation Problem

Arnold Butler, kitchen planning director at Hotpoint, stops to help a student use a set of plastic appliance models. In addition, the course supplies charts, installation data, and a special drawing triangle.

Students Can Use Hotpoint Kits To Set Up Kitchen Planning Depts. of Their Own

(Concluded from preceding page) kitchen design: Altering of door trim to fit units; the use of filler panels so that doors and drawers open properly; the relationship of right and left handed doors with walls; location of light; proximity to plumbing, and symmetry of design, to mention a few.

The students then participate in the actual installation of actual appliances. Cabinets are screwed in place, and counter tops are fastened to base units. Except for wiring and plumbing connections, the final installation is a working kitchen.

Besides their instruction, the students also are given factory tours to acquaint them with the manufacture of appliances. An inspection of the Hotpoint home economics department and the kitchen planning department gives students ideas for setting up their own kitchen planning services.

Hotpoint is proud of the fact that his courses have gone off precisely on schedule.

"We don't talk too long or too short on any subject," he said. "We also try to arrange for one social gathering during each course so we can meet and talk over our problems."

Hotpoint's kitchen planning department has prepared a special kit for these courses. After completing

the course, students are given the kits to use in establishing their own departments. The kit includes a kitchen-laundry planning booklet, perspective charts and explanations, and a specially designed drawing triangle. The kits also can be purchased by home economists and utility personnel.

Each weekly session is limited to an enrollment of 25 students so that class instructors can provide a maximum of individual attention. While the students work at their drawing boards, two instructors move around the class offering suggestions and answering questions. Former "graduates" have attested to the success of last year's courses. Many dealers and distributors reported that they had set up their own kitchen planning departments.

Hotpoint will follow up the school courses with a monthly bulletin prepared by the kitchen planning department, an effective method of keeping abreast of new developments, the company said. The bulletin will also contain a condensed form of the courses for those who were unable to attend the actual sessions.

The kitchen planning department, as part of its regular function, has designed more than 6,000 "personalized" kitchen plans, varying in size, content, and budget.

We grew up with the Wire Business

1909

1947

It was back in 1909 that the first welded wire shelves were produced for home appliances, here at United. They were crude by today's standards, largely hand made, and produced in small lots.

Now in a single week we build as many shelves, baskets, racks and other assemblies, as we did in a whole year back in 1909. To do this we have acquired a great deal of experience, knowledge and modern high speed machinery. Some of this

machinery had to be designed and built here in order to accomplish the tasks of our particular business. The development of this "know how" enables us to produce for you, the most complicated welded wire parts in quantities by the millions with a precision that will meet your requirements. And we can produce them for you at a fraction of what the cost would have been in 1909.

If you require welded wire or wire and steel parts, check with United first!



UNITED STEEL AND WIRE CO.
BATTLE CREEK, MICHIGAN

37th NRDGA Convention Set for N. Y. Jan. 12-16

NEW YORK CITY — Three talks and a panel discussion are scheduled for the major appliance and radio session of the National Retail Dry Goods Association's thirty-seventh annual convention to be held at the Hotel Pennsylvania here Jan. 12 to 16.

Though no speakers have yet been announced, topics to be discussed have:

Talks at the major appliance and radio session will cover: "The Market and Price Outlook—The Manufacturers' Point of View," "Where Will Appliance Profits Be Made and Lost?—The Retailers' Point of View," and "How Much Business Can We Expect from Television?"

The panel discussion will consider tie-in sales, trade-ins, salesmen payment plans, outside selling, "What Do We Mean By Service?", and "Are We Carrying Too Many Brands to Realize Maximum Profits?"

Other sessions will cover, from the department store angle, such topics as merchandising, personnel management, credit and instalment buying, building volume in smaller stores, store management, sales promotion.

General theme of the convention will be "Stabilizing for Prosperity."

Ebert Incorporates In Texas

AUSTIN, Texas—Incorporation in Texas of the Ebert Air Conditioning Co. of San Antonio was announced recently.

The company was chartered by Robert P. Cotter, R. L. Hutchinson and Otto E. Texel with \$15,000 capital stock.

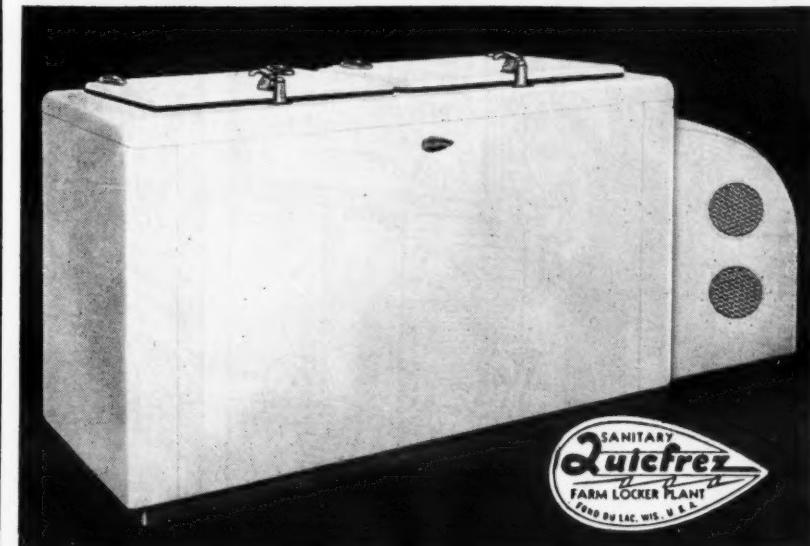
Sanitary Quicfrez

THE PIONEER OF FARM LOCKER PLANTS NOW READY FOR IMMEDIATE DELIVERY

Built to the highest quality standards throughout.

Complete, with Condenser Units—ready for you to install. Everything about the "QUICFREZ" Farm Locker Plant is engineered and built for years of dependable service. Thousands in daily operation since 1939.

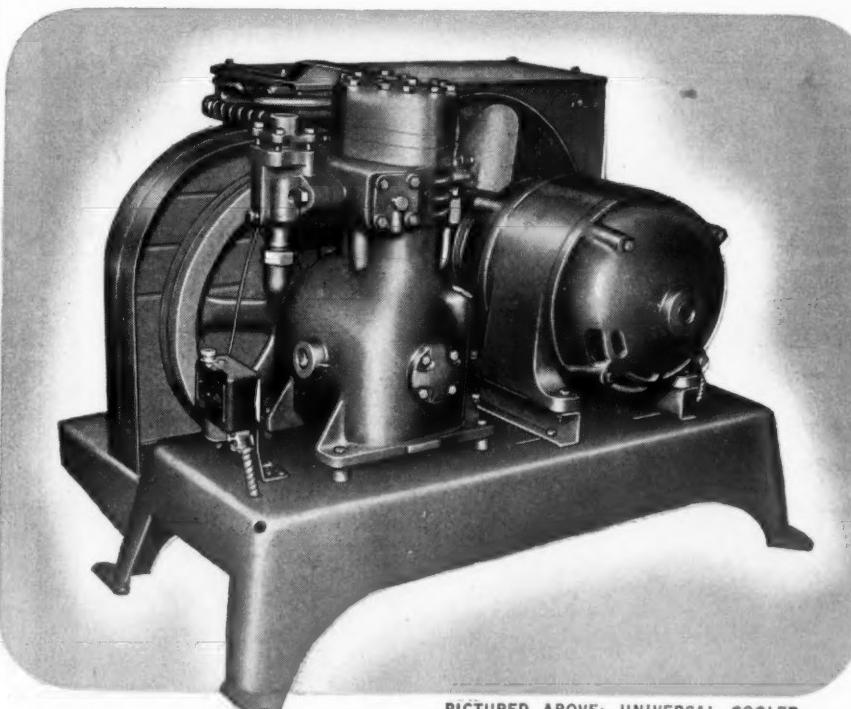
Valuable Exclusive territory open. Write or wire for franchise information. Sanitary has several good openings for salesmen.

**SANITARY REFRIGERATOR COMPANY**

FOND DU LAC, WISCONSIN

Ice Refrigerators For More Than 40 Years—
Quicfrez Farm Lockers Since 1939

IT'S SERVICEABLE!



PICTURED ABOVE: UNIVERSAL COOLER
3 H.P. REMOTE CONDENSING UNIT.

1/4 TO 15 H. P. REMOTE CONDENSING UNITS FOR COMMERCIAL APPLICATIONS

The unit illustrated is designed especially for heavy duty service in commercial refrigeration applications. Precision-built parts are carefully assembled, the unit is dehydrated, thoroughly run in and tested under actual operating conditions. Tell us about your refrigeration problems—let our sales engineers show you how Universal Cooler can solve them.

HERE'S WHY:

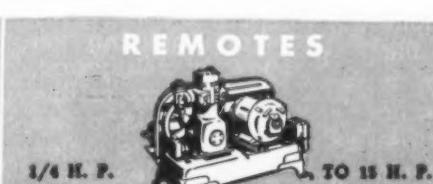
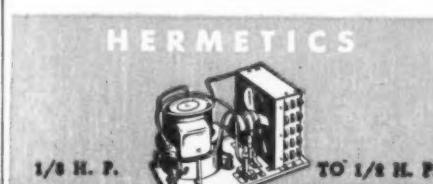
1 160 Universal Cooler genuine parts jobbers are strategically located throughout the country.

2 Wherever you are, you're within one day delivery of genuine Universal Cooler replacement parts.

3 Factory Rebuilt Replacement Compressors are available at U. C. D. jobbers for over-the-counter exchange—no delays, no long shutdown of units.

4 Universal Cooler units are made of quality materials and fit to close tolerances—nothing but minimum routine maintenance is needed for years.

5 A fully-equipped factory service department stands ready to help your parts jobbers and your servicemen with any special problem.

**UNIVERSAL COOLER**

DIVISION INTERNATIONAL DETROLA CORPORATION
MARION, OHIO • BRANTFORD, ONTARIO

YOUR REFRIGERATION EQUIPMENT WHOLESALER

Helps Make Your Time Pay Extra Profits

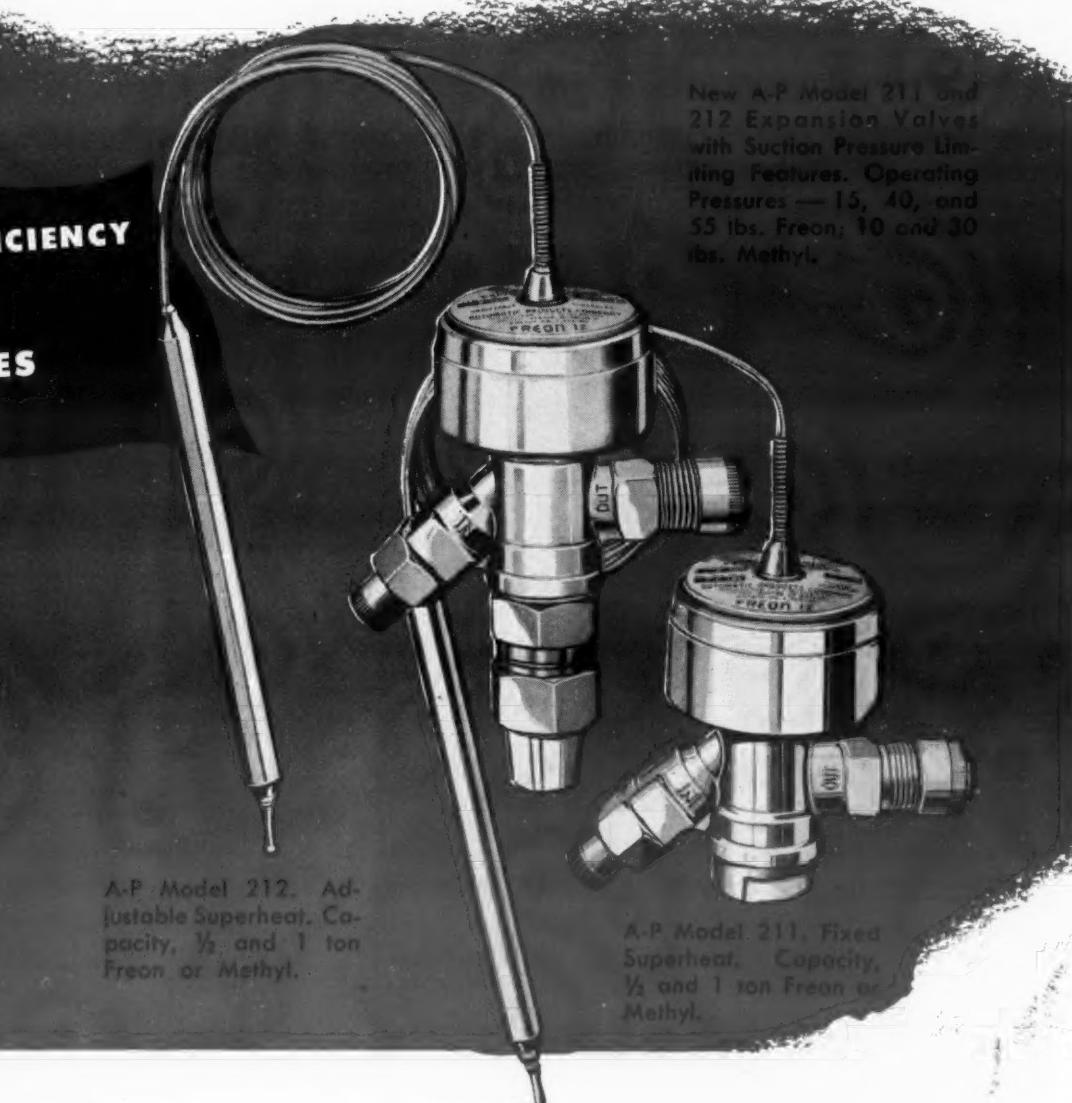


SAVE SERVICE TIME . . . IMPROVE REFRIGERATION EFFICIENCY
With New  THERMOSTATIC EXPANSION VALVES

A-P Model 203-C Thermostatic Expansion Valve. Adjustable Superheat. Capacity to 2½ tons Freon.

A-P Model 207 Thermostatic Expansion Valve. Adjustable Superheat. Capacity to ½ ton Freon.

A-P Model 206 Thermostatic Expansion Valve. Fixed Superheat. Capacity, to ½ ton Freon.



A-P Model 212. Adjustable Superheat. Capacity, ½ and 1 ton Freon or Methyl.

A-P Model 211. Fixed Superheat. Capacity, ½ and 1 ton Freon or Methyl.

You can depend on your wholesaler's recommendation of any product — without wasting your own time in trial-and-test proving. Helping you make more money and more satisfied customers, is his business and pleasure. See your Refrigeration Equipment Wholesaler for the latest in A-P DEPENDABLE Refrigeration Valves.

AUTOMATIC PRODUCTS COMPANY

2450 NORTH THIRTY-SECOND STREET • MILWAUKEE 10, WISCONSIN
Export Department, 13 East 40th Street, New York 16, N.Y.



DEPENDABLE

Refrigerant Valves

STOCKED AND SOLD BY GOOD REFRIGERATION WHOLESALERS EVERYWHERE . . .
RECOMMENDED AND INSTALLED BY LEADING REFRIGERATION SERVICE ENGINEERS

YOUR Refrigeration Wholesaler knows that your "time is money"—that minutes lost trying to find some part or tool is money lost—time you can't put on the profit side of your books. So he spends a lot of thought and effort arranging his stock shelves so he can give you the parts and equipment you need instantly. And he'll have at his finger tips any new tools that may cut minutes from some essential operations of yours . . . or a new part that may lick some constantly recurring service problem . . . or he may be able to pass on a simple time-saving short cut gleaned from his own or others experience.

Get this New

FALL AND WINTER
DEPENDABOOK
NO. 145

It's brand new, it's America's finest source for
REFRIGERATION,
AIR CONDITIONING and
ELECTRIC MOTOR
Parts and Supplies

Your copy is waiting for you.
Write on YOUR letterhead, today to
THE HARRY ALTER CO., INC.

728 S. Michigan Ave.,
Chicago 16, Illinois
134 Lafayette Street
New York 13, New York

We Manufacture XL

'Freon' Compressors and Condensing Units (1 to 7 1/2 h.p.)

Ammonia Compressors 4x4 — 5x5 — 6x6 — 8x8
Ammonia Valves 1/4" to 5" Screwed and Flanged

Hilger 3 Way Valves For Dual Relief

Ammonia Flanges—Strainers—Discharge Check Valves

AIRCRAFT PRODUCTION ENGINEERS

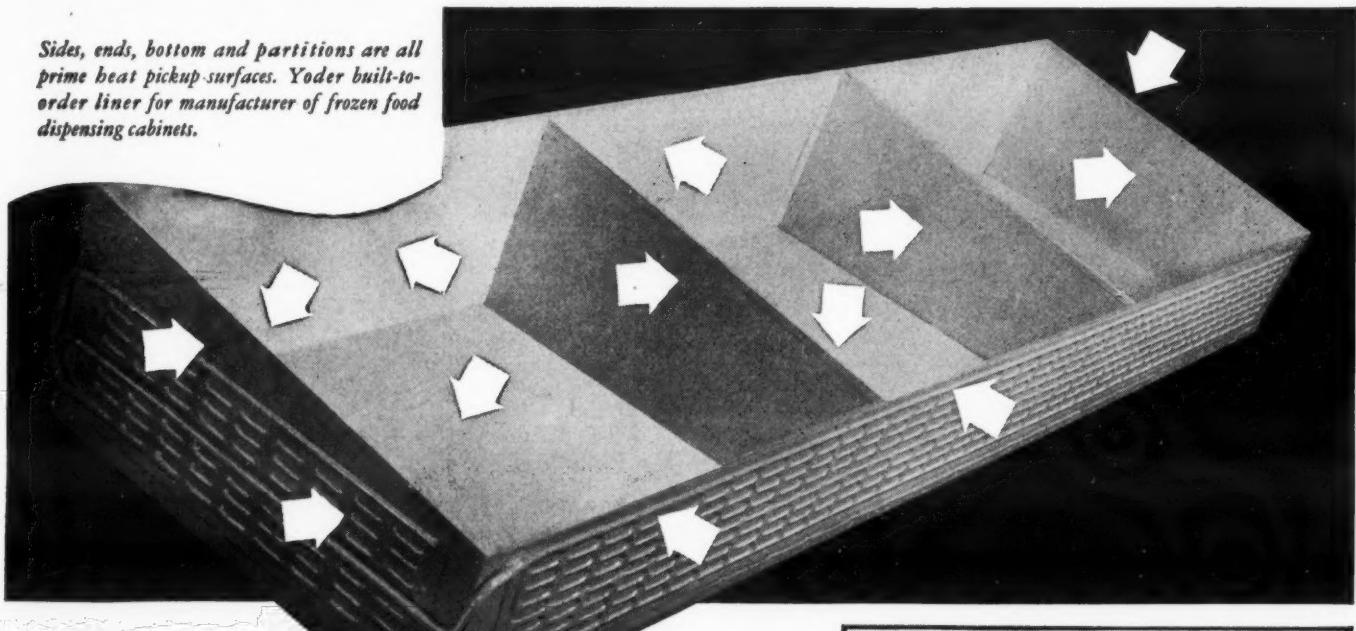
DIVISION OF

THE XL REFRIGERATING CO.

1834-42 WEST 59th STREET

CHICAGO 36, ILL.

Sides, ends, bottom and partitions are all prime heat pickup surfaces. Yoder built-to-order liner for manufacturer of frozen food dispensing cabinets.



YODER FREEZER LINERS

**the last word
in space-saving, efficient
heat pickup**

Yoder Liners are made to fit any shape and size of cabinet, box, or case—domestic or commercial—serving as a liner, shelf, tray or partition for storage, display and dispensing purposes. It occupies the minimum of space—leaving maximum space available for storage. It is strong, rigid, trouble-free, easily installed. Above all, the revolutionary Yoder channel design—a close network of tiny flat channels insures the highest known heat pickup efficiency, as proved by its K factor of 2.5 for temperatures below 20°F. This means more and quicker refrigeration per square foot of surface, or that a smaller plate surface will meet your requirements at lower cost.

For interested manufacturers with quantity requirements we design and build liners to meet individual requirements at a cost which usually represents a substantial saving in unit cost.

THE YODER CO., Refrigeration Division
5580 Walworth Avenue • Cleveland 2, Ohio



REFRIGERATION PLATES
LINERS • SHELVES • PLATE BANKS

OFF THE CHEST

LOCKER PLANTS HAVE KEY FOOD SAVING ROLE

Office of the Executive Director
Frozen Food Locker Institute, Inc.
Omaha, Neb.

Editor:

Your editorial on page 1 of the Nov. 24 issue of the NEWS—"Next Year We May Plant 'Victory Gardens' Again—is naturally of extreme interest to everyone connected with the frozen food industry. The editorial is extremely timely and true, I think, in every detail.

May I suggest, however, that in the preservation of large quantities of foodstuffs at the lowest possible cost, America's 4½ million lockers have played a very large part and should have received their fair share of attention in your editorial.

It is unfortunate that present high construction costs and difficulty of financing have somewhat slowed down current activity in the construction of new locker plants. Recent weeks, however, have brought an indication of considerable revival of interest and should the threatened and predicted food shortages occur during 1948, the construction of 2,000 new plants throughout the United States would be justified from every possible standpoint.

The erection of these new plants, capable of taking care of the major food needs of entire communities would, in our opinion, be the best

possible answer to the waste and high cost of food and make available to the producers of such food a most economical means of conserving what they raise.

R. R. FARQUHAR
Executive Director

HOME FREEZER SELLING PACKS GLAMOUR APPEAL

Amana Society
Amana, Iowa

Editor:

For sometime I have been wanting to write you and express our appreciation for the splendid editorials which have appeared in your publication in recent months regarding the sale of home freezers.

The editorial which appears in your issue of Nov. 3, "Hollow Shell" Dealers are Missing Plenty," really put it out in big chunks. For the retail salesmen, the home freezer has everything; substantial savings on the family food bill, better living, better balanced and more healthful diet, convenience and many hours of kitchen drudgery saved each week. In addition to all this, the home freezer has an over-all story which can be romanticized to the sky and the glamour of a Hollywood movie star.

What other appliance can even approach the powerful sales appeal of the home freezer! The problem facing the industry is to bring the average appliance dealer to a realization that in the home freezer he has a profit opportunity bigger and better than anything that has ever been presented to him before and that to cash in on this opportunity, he only needs to get out and tell the story to the potential buyers in his community.

The whole subject is presented so clearly and forcefully in the editorial referred to, that we want to get it before each of our distributors and our entire sales personnel as soon as possible. I presume that reprints will be available. If so, please send us 500 copies.

E. L. HINCHLIFF

AIR CONDITIONED HOMES TO CUT RESORT TREKS?

Phoenix, Ariz.

Editor:

This is to point out a possible tie-up along lines you are exploring. May be no good—or may be good. Cogitate and decide.

Phoenix resort advertising shows what the air conditioning people up north are letting slip out of their regional economic assets through failing to inform a gullible public that they can buy skin comfort at home cheaper and a darn sight surer than they can come out to—or go down South to—natural sunshine.

They don't advertise the northers here. Last night we slept under our wool bat quilt. My wife bet me it would frost—and lost, but it was plenty chilly. Laze in bed till 9 in a steam heated resort hotel and when they get up the sun is doing its work, and as the resort men advise, they then laze in the sun.

A neighbor owns a sheet metal business in Ohio. His health slipped, and he came out here for the sun. The old violet rays got him all hopped up, so he wanted to buy—as you called the turn—a new home at grossly inflated tourist gyp price. His son is running the business back in Ohio.

Now dad went out on a bright sunny day, got a job in a local shop at \$1.90 an hour and is kicking because it is 25 cents below the scale he is paying at his own shop in Ohio, but otherwise bragging how the sun makes him feel like work again. This morning we saw him drive off to work with all the heavy clothes he could cocoon himself up in.

His wife won the argument that he better try the climate a year before putting down a big chunk of their life savings. But many new arrivals do buy climate with their total reserve, and bet they can find a job to keep going.

Why don't the climate mongers by mechanical process keep 'em at home to spend their money? Because they are not half sold on their own goods and what they will do. Same in summer—look at Maine—look at the rush to your own west shore from Chicago. How many \$?

Old man McKee, the banker in Los Angeles, always a newspaper man's friend, told a guy writing for *SatPost* one time that the local folks, pushed around by swarming tourists looking for bed and grub till prices zoom on the year-round residents—would rather the suckers just send their money and stay at home.

If the air conditioning folks would work the year-round to make homes livable—as they have business buildings—we wouldn't be pestered with the "winter tourists," and the chamber of commerce would plug for industries to keep up earnings by working productively, instead of enticing suckers to trim with a million gyp games.

Maybe the air conditioning manufacturers are not undersold on their own merchandise—but from the license plates on cars around here, one gets to think that they have missed convincing a big slice of their public.

Don't forget the sun lamps.

SAM F. PARKER

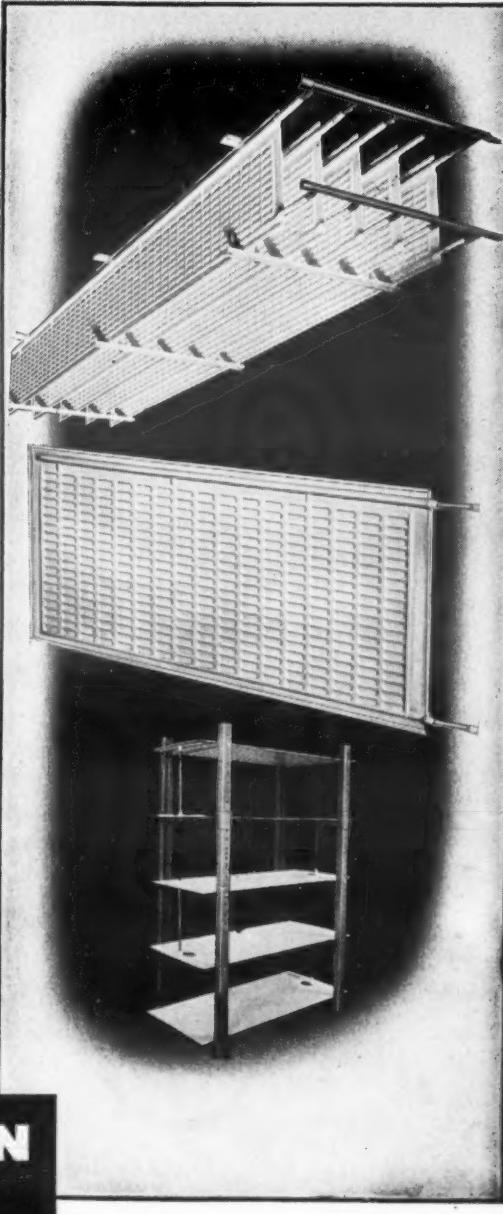
PUERTO RICAN TIDINGS

Falansterio P-5
Puerta de Tierra,
Puerto Rico

Editor:

I have been a subscriber to the AIR CONDITIONING & REFRIGERATION News for about three years or so and I find it very interesting and useful; one of these days I will write you of my opinion of your editorials.

JOSEPH FRAITES



STREAMLINED BEAUTY!

PERFORMANCE-TESTED FOR CUSTOMER SATISFACTION



BEN-HUR FARM and
HOME FREEZERS

PRECISION-BUILT FOR LEADERSHIP AMONG TODAY'S FINEST FREEZERS

CHOICE TERRITORIES
ARE STILL OPEN
FOR DISTRIBUTORS
AND DEALERS

Write for Technical Details
and Sales Advantages

BEN-HUR MFG. CO.
Dept. A.C., 634 East Keefe Ave.
Milwaukee 12, Wisconsin

HEALTHFUL LIVING THROUGH FROZEN FOODS

'Warm Room' Lockers Plus Self-Service Meat Cases Build Volume for Merchant



An interior view of Horney's Self-Service Meats Co. in Denver shows a portion of the 234 refrigerated storage lockers and four refrigerated self-service meat cases that have combined to step up sales in all lines, including groceries and frozen foods.

Meat Sales Alone Gross over \$1,100 Weekly, Three Butchers Do Cutting, Processing

DENVER — Two hundred and thirty-four refrigerated storage lockers are provided for customers of Horney's Self-Service Meats Co., at 18 South Broadway, here—as part of an unusual plan developed by Duane Horney, owner.

Horney completely remodeled his store in July, with the emphasis on locker service and self-service in meats, after three years of operation on more standard clerk-service basis.

The first thing he did was to install two banks of "warm room" lockers, one on each wall of the store, lockers renting at \$19.50 and \$15.50. In the center of each bank of lockers is a 30-cu. ft. sharp freeze compartment, separately powered, whereby customers may quick-freeze meats, produce, game, etc., without the discomfort of entering the refrigerated chamber.

The immediate increase in meat sales, produce sales, etc., next en-

couraged Horney to go into self-service meats. For this purpose he ordered four specially-constructed 12-ft. self-service cases, and converted meat into 100% self-service.

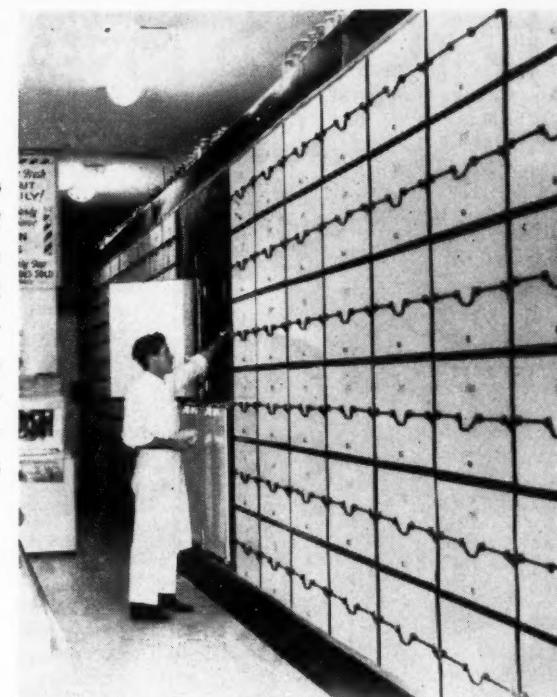
Three butchers do the cutting, packaging, self-service meats from 8 o'clock in the morning until noon, and handling locker processing for customers from 2 o'clock in the afternoon until 8 o'clock at night.

Packaging is done entirely in M.S.A.T. 80 cellophane and M.S.T. cellophane. All packages are hand-sealed with an electric sealer, and heat labeled.

Sales from the self-service cases average \$175 per day through the week and \$250 on Saturday, which represents a tremendous increase, according to Horney.

Sales of groceries, quick-frozen foods, and other lines carried by the store have increased almost in proportion, according to the Denver operator.

An employee places meats to be frozen inside one of the 30-cu. ft. sharp freeze compartments provided by Horney as a convenience to his locker patrons. Sharp freezing is accomplished here without requiring him to enter a refrigerated room.



Ganger Co. Opens New Salesroom

MIAMI, Fla.—Norton R. Ganger Co. has opened its new office and salesroom at 601 North Miami Ave. The Ganger firm handles Westinghouse air conditioning equipment, McCray commercial refrigeration, Herman Nelson fans and blowers, and Airflight circulators.

Air Comfort Corp. In New Quarters

CHICAGO—New offices, shops, and warehouse at 816 North Kostner Ave. here have just been occupied by Air Comfort Corp., Carrier distributor, the firm announced. It said the new quarters provide increased space and improved facilities. Air Comfort's new telephone is Dickens 3400, the zone Chicago 51.

WILSON REFRIGERATION, INC.

- FARM AND HOME FREEZERS
 - REACH-IN REFRIGERATORS
 - WALK-IN REFRIGERATORS
 - FARM MILK COOLERS
- DIVISION OF WILSON CABINET CO., INC.
SMYRNA, DELAWARE

PAR REFRIGERATION EQUIPMENT

Tops in
PERFORMANCE
ECONOMY and
EFFICIENCY

Lynch ... By Comparison—You'll See PAR
Manufacturing Corporation
General Offices, Toledo 1 • Factory, Bellmore, Ohio, U.S.A.

MASTER

Food Conservators

have the call. This Modern Food Conservator has many unusual advantages. Sold through distributors of refrigeration and insulation.

Write for particulars

Master Manufacturing Corp.
121 Main St. Sioux City 4, Iowa

Over 1,000,000 In Use

SANTOCEL

opens the door to new opportunities in refrigeration



Here's a good example of the selling advantages . . . the broad new markets . . . open to cold equipment manufacturers who capitalize on space savings possible with Santocel.

These new, all-metal refrigerator doors insulated with Monsanto's unique silica aerogel, are less than half the thickness, half the weight, of doors containing previously preferred insulating materials. Their overall thickness of 3 1/8" furnishes cold protection equal to that of an old fashioned door 8" thick. Reduced weight and less bulk means easier handling, more space, simplified construction, longer life, lower maintenance costs.

If you make or use any kind of insulated equipment, Santocel can give you maximum storage capacity with minimum overall dimensions . . . increased sales appeal and profit potentials . . . widest latitude for new design conceptions. Get complete Santocel information and technical data valuable to you from: MONSANTO CHEMICAL COMPANY, Merrimac Division, Boston 49, Mass.

Santocel: Reg. U. S. Pat. Off.



The Santocel seal on refrigerating equipment for home or industry means that it is protected with "the world's most efficient insulation."

Bulk reduced almost
3/4 with Santocel insulation.

MONSANTO
CHEMICALS...PLASTICS

SERVING INDUSTRY... WHICH SERVES MANKIND

Santocel insulated door manufactured by Refrigerator Doors Inc., Mt. Kisco, N. Y.

Foremost

IN THE LOW SIDE FIELD

Filterpure

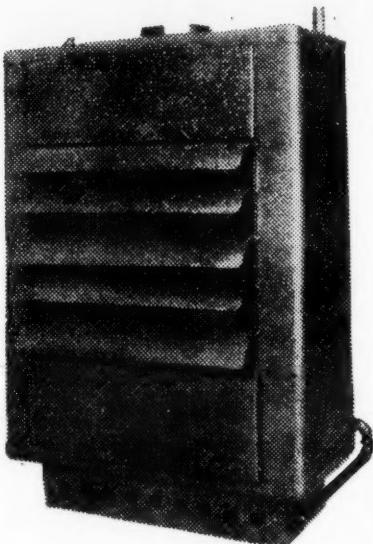
Combines the most advanced features in Unit Cooler design. Exclusive Betz Coil construction—Patented, built-in Louvres—Patented Liquid distributor—Air Diffuser—Guaranteed Ratings—Heavy Duty Motors—Quiet—Streamlined—Rugged.

Filterpure is the choice of leading Refrigeration Wholesalers, dealers and users from coast to coast.

Sold by leading Refrigeration Wholesalers

BETZ CORPORATION
HAMMOND, INDIANA

SUSPENDED GAS UNIT HEATERS



85,000—125,000—165,000 BTU capacity. Delivery within 3 or 4 days.

This is a union manufactured Product.

Some exclusive territories are available.

• • • • •

We also manufacture a combination heating and cooling unit, gas fired furnace and the NAT "Self-Contained" Air conditioning unit.

THE NAT CORPORATION

2710 McGee Trafficway

Kansas City 8, Mo.

One of a series of messages to help you increase your understanding of business paper advertising, and its effect on your business.

Ever hear of a salesman who knew how to sew?

SEEMS THERE WAS a young salesman who took a job with a company that makes electric blankets. He figured he could sell those blankets a lot better if he knew how to make one.

So he spent enough time in the factory to learn every step in their manufacture—cutting, wiring, sewing and all. The experience proved so valuable that today the company requires every salesman to *make* one of the blankets he sells.

That sounds like such a good idea that maybe it could work *both ways*. Let the *production man* learn something about how they sell what he makes. The result should be a better job in both departments, for producing and selling have one important thing in common. Both thrive on *mechanization*.

Just how efficiently does business paper advertising work? If you'd like to see some examples, we'll be glad to send you a recent ABP folder on actual results. Also, if you'd like reprints of this advertisement (or the entire series) to show to others in your organization, you may have them for the asking.

AIR CONDITIONING & REFRIGERATION NEWS

is one of the 129 members of The Associated Business Papers, whose chief purpose is to maintain the highest standards of editorial helpfulness—for the benefit of reader and advertiser alike.



50% More Salesmen May Be Required, NERA Survey of 50,000 Dealers Indicates

By C. C. Simpson, Managing Director, National Electrical Retailers Association

If retailers are to thrive and prosper as consumer outlets for appliances and radios, then the electrical industry as a whole must assume responsibility for guidance in developing and effectively training sales applicants as well as giving serious consideration to the problem of adequate compensation, it is evident from an analysis of the survey on the Selection, Training and Compensation of Retail Appliance Salesmen recently completed by the National Electrical Retailers Association.

Questionnaires on the subject were submitted to association members in all 48 states, Alaska, Canada, and Hawaii. Firms reporting ranged from \$4,800 to \$500,000 in annual sales volume, and the analysis of returns is, therefore, considered representative of existing practices and conditions both geographically and as to various sized dealers. Similarly, comments made by them are prophetic of future problems which must be faced by the entire industry.

Needs and Where

Salesmen Will Work

The nation's retailers of appliances and radios will need 100,000 additional salesmen as soon as merchandise becomes more plentiful, it was developed by the NERA survey. Where the average dealer now employs four salesmen, he expects in

the near future to employ six in all.

If dealers can secure the needed additional salesmen, the estimates based on the survey are that 20.3% will work only inside on the sales-

room floor. A much smaller number, or only 5.1% will be used only as outside salesmen, while the majority, or 74.6% will work both inside and outside the dealers' stores.

* * *

Table 1—How Many Salesmen Are Required and Where Will They Work?

Average Number Now Employed	Average Number Dealers Expect to Employ Later	Where Will Salesmen Work?	Number Now Required by 50,000 Dealers	Number Required Later by 50,000 Dealers
		Inside	Outside	Both
4	6	20.3%	200,000	300,000
		5.1%		
		74.6%		
		100.0%		

Obviously, if 20.3% of the salesmen that dealers expect to hire will work only on the salesroom floor, then these dealers will have to back up their sales efforts with all possible methods of getting customers into their stores—such as advertising, telephone solicitations, and other direct contacts.

On the other hand, an equal or greater amount of effort must be exerted by the other dealers to secure the largest possible volume of sales from the part-inside and part-outside sales force of 74.6% and the 5.1% working strictly as outside salesmen.

Selection of Salesmen

Although the difficulties of attracting suitable sales applicants are constantly mounting, it is apparent from the survey that retailers are actively working at the problem of securing salesmen.

This fact is borne out by answers to the question: "Where do you get

your salesmen—advertise, interview drop-in applicants, or through friends?"

A total of 22% of the dealers reported that they use every possible means of securing applicants, including all three means mentioned in the question. A larger number, or 28.8%, advertise for all applicants. Those who take advantage of personal contacts, such as friends, outside business and social connections, former associates, etc., accounted for 23.7%.

Only 10.2% relied on drop-in applicants, while 5.1% had some other means of discovering salesmen prospects, such as through distributor salesmen (3.4%) or from GI government training program (1.7%).

No turn-over in sales personnel was reported by 3.4%, and the 6.8% who reported no special method were mostly in the class of owners of stores operated by husband and wife or some other member of their immediate families.

* * *

Table 2—Where Do You Get Your Salesmen?

All Possible Means	Advertise (Only)	Personal Contacts	Drop-Ins	Other Means	No Turnover	No Special Method
22.0	28.8%	23.7%	10.2%	5.1%	3.4%	6.8%
*	*	*	*	*	*	*

A decided preference for men as retail appliance-radio salesmen was observed. Dealers reported that 62.7% hire only men, and 37.3% hire both men and women.

The figure of 37.3% who hire both men and women would seem to indicate that many dealers now have women in their employ, as the result

(Concluded on next page)

ENGINEERED to fit..

FORGED FLARE NUTS AND FITTINGS

Prompt Shipment on most items

Electrimatic

2100 INDIANA AVE CHICAGO 16 ILLINOIS

91% of Dealers Take Part In Training Sales Help; Most Use Male Demonstrators

(Concluded from preceding page)
of the war-time shortage of man-power.

However, when asked whether in their opinion men or women make the best appliance-radio salesmen, 76.3% of the dealers reported that men are best, 22% stated that either men or women are good salesmen, while only 1.7% registered a preference for women sales personnel.

Several dealers stated that women

were valuable in the selling of laundry equipment, and for specialized fields such as sewing machine sales, and as demonstrators of various home products.

In this connection, a total of 59.5% of dealers stated that they now use the services of a woman home/store demonstrator, 3.0% occasionally employ a demonstrator, while 37.5% have not yet done so, although several dealers indicated they intend to later.

* * *

Table 3—Men vs. Women and Use of Home/Store Demonstrator

Do you hire men and women or all men?		Which is best?		Do you use the services of a woman home/store demonstrator?	
Both	37.3%	Men only	76.3%	Yes	59.5%
All men	62.7%	Either	22.0%	Occasionally	3.0%
		Women	1.7%	No	37.5%
	100.0%				100.0%

Qualities most looked for in both men and women sales applicants were many and varied, although most replies received by NERA indicated that dealers are looking for sales prospects of personal integrity, intelligence, and a desire to work and get ahead.

Getting Sales Personnel on The Dealer's Payroll

It would seem from the survey that the question of getting sales personnel on the payroll poses a problem for many dealers.

Dealers are generally of the opinion that educational standards are not of serious consequence, so long as the applicant has a command of good English and can meet the public. This fact is brought out by the 52.6% who stated they require that their applicants have a high school education—which would reasonably seem to provide the necessary attributes—although 47.4% of the dealers stated that they require no special educational background.

Table 4—Getting Sales Personnel on the Payroll

	Standard	Own	Mfrs.	None
(1) Use of application blanks	3.4%	25.4%	3.4%	67.8%
(2) Education standards reqd.		High School	None (or grade school)	
(3) Use of aptitude test	8.5%	52.6%	47.4%	

Interests In Sales Positions

While a goodly number, or 40.7%, of the dealers reporting in the NERA survey said they were experiencing a normal or above-normal interest on the part of men interested in accepting a sales job, a greater portion, or 59.3%, indicated an unusual lack of interest on the part of prospects.

Probable core of the trouble is no doubt reflected in such dealer statements as "Lack of interest—good salesmen want too much money" . . . "I find it almost impossible to hire salesmen, unless you guarantee them about \$300 a month" . . . "Young men are afraid of work on a salary and commission."

Training of Salesmen

Dealers are definitely training-conscious, it was brought out by the

or elementary school education only. One dealer, it is interesting to note, commented that the best salesman he has is only a graduate of the sixth grade.

The survey does indicate, however, that some business-like arrangement should be recommended to dealers for getting the pertinent facts on sales applicants before they are hired, and assistance given dealers in carrying out the plan.

While 32.2% of those reporting used some form of application blank provided by the manufacturer and made available through the distributor—67.8% of those reporting used no form of application blank at all.

Likewise, it is apparent from the NERA survey that there exists a fertile field for education of dealers in the use of the various aptitude tests provided by manufacturers. Those who now use such tests number 8.5%, those who occasionally use them 51.1%, and those who do not have such tests available or are unaware of their benefits, 86.4%.

* * *

NERA survey. Evidence to back up this statement is found in the fact that 91.5% of the dealers reported that they use some definite form of training—either their own or their own supplemented by outside training provided through electric companies or manufacturers courses administered by distributors.

Only a bare 8.5% of dealers reported no special training, and here again, the replies received were mainly from small dealers employing members of their own families as sales people.

In the breakdown, 40.7% of the dealers indicated that they train salesmen themselves, either by assigning the responsibility to the senior salesman or manager, or as in the case of owner-manager, by doing the training themselves, while 50.8% use outside training to supplement their own programs.

* * *

Table 5—How Salesmen Are Trained

Train them ourselves	Use outside training to supplement our own training	No special training
40.7	50.8%	8.5%

Time Allotted for the Training Period

Time allotted for the training of salesmen varied according to the size of dealer sales volume and the facilities available for sales training.

Certainly regular sales meetings should be held. We suggest a mini-

um of one hour a week, in order to provide the needed continuous training. Of course, private conferences will in addition be necessary with those salesmen not yet making their quotas.

Few dealers have yet worked out a system of setting quotas, but many intend to do so as the supply of merchandise increases.

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PROTECT YOUR MERCHANDISE WITH THE ROLL-OR-KARI DUAL TRUCKS EQUIPPED WITH THE NEW WEB-LOCK AND TIGHTENER. Patented Step-On Lift. Folding Handles.

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1000 LB. CAPACITY
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Compensation

The question of how to pay a sales man is one matter on which most dealers want advice. The majority of dealers reporting in the survey use the plan of salary and commission. Many of the most successful dealers use, in addition to the salary and commission plan, an incentive method of rewarding the better sales-

men. Such incentives usually consist of something special each month, in order to get the entire sales organization working as a unit to make more and more sales. Therefore, it would seem that the best plan for compensating salesmen is salary, commission, and incentives.

An analysis of the various compensation plans shows:

* * *

Retail Appliance Salesmen

	Straight Salary	Commission	Salary & Commission	Commission & Guarantee	Commission & Draw	Salary & Bonus or % of Profit
% Dealers	14.0%	27.9%	30.2%	4.7%	9.3%	13.9%
Average	\$218 mo.	9.2%	Sal. \$156	Guar. \$207	Draw \$185	Se. \$206
High	\$265 mo.	13.0%	Sal. \$215	Com. 5.5%	Com. 10.0%	*see remarks
Low	\$170 mo.	4.5%	Sal. \$100	Com. 8.0%	Com. 12.5%	Guar. \$200
			Com. 1.0%	Guar. \$200	Draw \$108	*see remarks
				Com. 3.0%	Com. 7.5%	Com. 7.5%

*Remarks: It was impossible to present any average figures on salary and bonus or per cent of profit plans used by various dealers, due to wide variations in such plans, although all dealers using these plans reflected a serious study of the question of compensation. It is the opinion of the NERA management that these dealers are those of long experience, who are fully qualified to administer their own set-up, aided by a knowledge of their own costs-of-doing-business and assistance of the analysis by manufacturers of various plans possible to use.

* * *

In analyzing the forms of compensation other than the stated bonus plans, it is observed that no two plans function alike. For

instance, in the category of dealers paying straight commission or salary and commission, where one dealer pays \$40 a week and 6% commission,

* * *

Table 6-a—Average Monthly Earnings

(Taken from dealers in business before the war)

	Earnings Now	Earnings Pre-War
Average	\$300 mo.	\$220 mo.
High	\$500 mo.	\$400 mo.
Low	\$200 mo.	\$135 mo.

another pays 6% and no salary at all. Many dealers, it is apparent, do not know their actual costs of doing business, or there would be no such wide variation.

Some dealers indicate they expect to find it necessary to spend more on commissions in the future.

The entire question of compensa-

tion might resolve itself, therefore, into the one problem: what % gross profit can a dealer expect to pay in commission? The best authorities indicate that 10% is the maximum that can be paid out to salesmen.

DISTRIBUTORS:

Fiberglas Board Insulation
Dust-Stop Air Filters

Reznor Gas Fired Unit Heaters

Electric Motors For Immediate Delivery

Model B558, frame 224, 1750 RPM, 2 HP, 220 volt, 60 cycle, 3 phase, Delco Electric Motors—List Price \$76.00

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Model 598, frame 254, 1750 RPM, 5 HP, 220 volt, 60 cycle, 3 phase, Delco Electric Motors—List Price \$101.00

Model 1425, Style 214, 1750 RPM, ½ HP, 110-220 volt, 60 cycle, Emerson Electric Motor—Less Regular Dealer Discount Price \$40.70

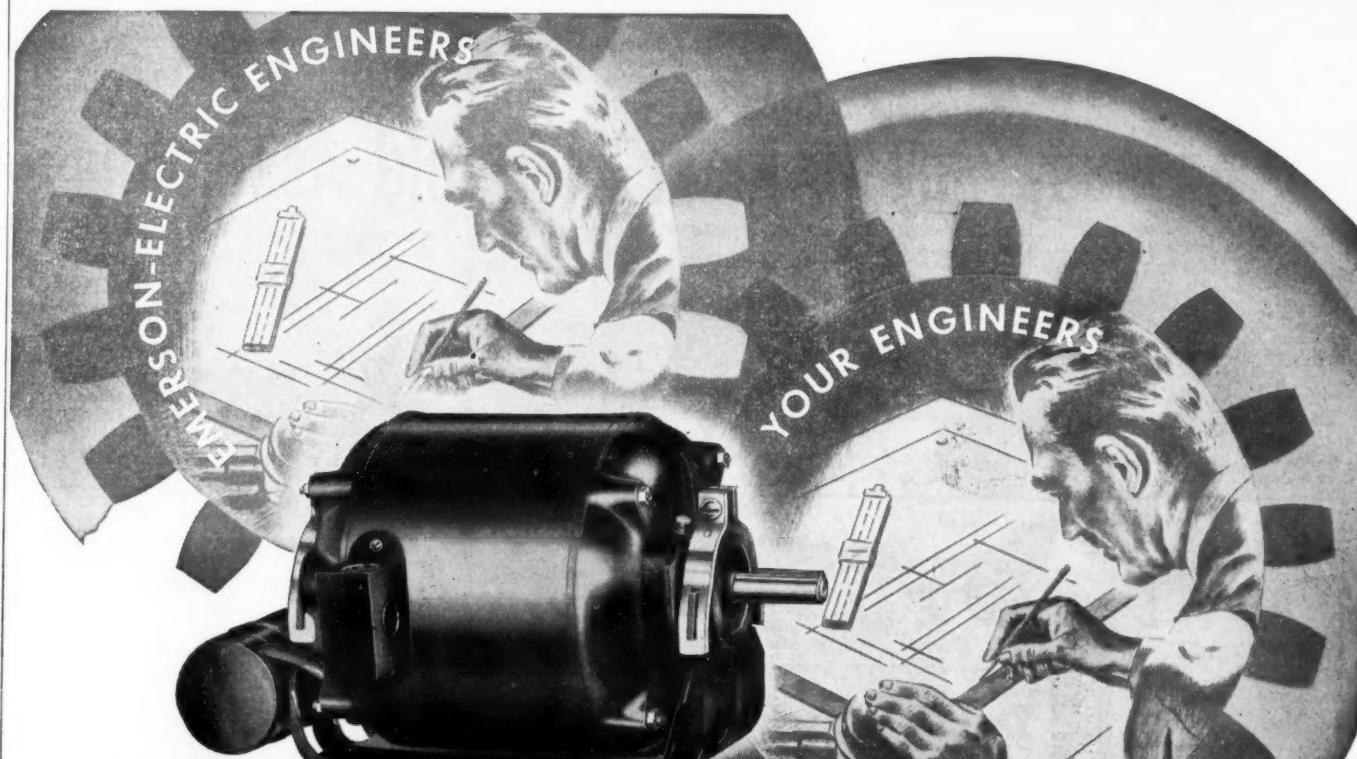
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Results of Wax Separation Tests, Story on Powdered Metal Bearings Told ASRE Group

DETROIT—Two aspects of lubrication—the effect of oil in refrigerant and the manufacture of powdered metal bearings and filters—were discussed at the November meeting of the Detroit Section, American Society of Refrigerating Engineers.

Dr. Walter O. Walker, director of research and development for Ansul Chemical Co., talked on "Lubricating Oils as the Manufacturer of Refrigerant Views Them" with particular emphasis on the waxing problem, while D. B. Martin, sales manager of Chrysler Corp.'s Amplex Division, described the manufacture of Oilite bearings and other applications of powdered metal.

PROPERTIES OF OILS

The various properties of refrigeration oils were first touched upon briefly by Dr. Walker, who pointed out that such things as viscosity and pour point are not of extreme importance.

Addition of methyl chloride to oil, for example, reduces both the pour point and viscosity, he said, and oil has little effect on the boiling point of a refrigerant. A 20% mixture of oil in methyl chloride raises the latter's boiling point only 0.9° F., he declared.

And as for the presence of moisture in oil, the manufacturer of oil is cognizant of the fact that moisture must be kept out, Dr. Walker said. The dielectric test is the only practical method of testing oil for moisture content, oils falling in the 25 kv.

range and above usually being safe in this respect. The limits, he added, must be more closely guarded with "Freons" than with sulphur dioxide or methyl chloride.

Major problem involved in oils used with refrigerants today, stated Dr. Walker, is that of wax separation, which has become increasingly important with the advent of low temperature units.

At low temperatures a wax separates from the oil and may clog up the expansion valve, making the system inoperative or inefficient, the results being similar to those caused by moisture freeze-ups at the valve, he explained.

Experiments have been conducted at the Ansul laboratories for several years on this problem, and Dr. Walker reviewed the methods of making tests and their results.

UNIFORM CURVES RESULT

Studies of oil-methyl chloride mixtures varying from 1% to 10% oil to determine the temperature at which wax formed all resulted in uniform curves, he declared.

"The wax separation curve is always the same for the same batch of oil, though not necessarily the same for different batches of the grade and make," explained Dr. Walker.

He also emphasized that the point of wax formation is not identical with the so-called "wax point" as specified by oil manufacturers. The latter does not take into consideration the different reaction when oil is mixed with refrigerant.

Generally, he said, oils of lower viscosities have lower wax separation points. An analysis of 77 oils showed that on the average a 1% mixture of oil and methyl chloride had a wax separation point of -58° F., while a 15% mixture formed wax at -13° F.

Maximum temperatures at which wax separated from the oil-methyl chloride mixture was -22° for a 1% mixture and 10° F. for a 10% mixture. Minimum figures given by Dr. Walker were -70° for the 1% mixture; -28° F. for the 10% mixture.

These figures rather generally apply also to "Freon-12," although

with some of the newer oils the wax separation occurs at a lower point with "Freon-12," he said.

Turning to the practical problems involved, Dr. Walker asserted that "no one has yet proven that because wax will separate out of oil, it will necessarily clog the expansion valve."

"Some waxes will pass through an expansion valve easily, while others are hard and will not go through the valve. Laboratory tests have shown that wax will sometimes 'freeze up' an expansion valve and then melt after the machine has stopped."

This "cycling" has gone on for as long as a week in the laboratory, according to Dr. Walker.

The problem of distinguishing between a valve freeze-up due to moisture and one resulting from wax separation is not too difficult, he added, because the wax forms at a much lower temperature than the moisture freezes.

2 SOLUTIONS TO PROBLEM

The two solutions to the problem of waxing, he explained, were the use of an oil which is characterized by the least wax separation, and the prevention of oil passing over into the system from the compressor, by means of an oil separator.

In outlining the technique devised by Amplex for producing Oilite self-lubricating bearings, Mr. Martin explained that powdered metal is first carefully mixed in a drum for several hours. It is next carried forth to a rotary-type screen, he said, and then stored in hermetically-sealed containers (to prevent oxidation) until ready for use.

The second major step consists of feeding the blended powders into dies of special presses where they are compressed to required shape and dimensions, Mr. Martin continued. This operation is termed "briquetting." Pressure varies from 15,000 to 100,000 pounds per square inch, it was noted.

Next, the fragile "briquettes" are delivered to a sintering furnace in which they are transformed into strong cellular structures, Mr. Martin pointed out. Then, he continued, they go to a special sizing press to be brought to final specifications.

Finally, the bearings are submerged in hot oil baths to impregnate them with oil, Mr. Martin related. He said 20 to 25 grades of special lubricating oil are used. Since the bearing is a porous metallic sponge, it absorbs the oil by capillary attraction, he explained.

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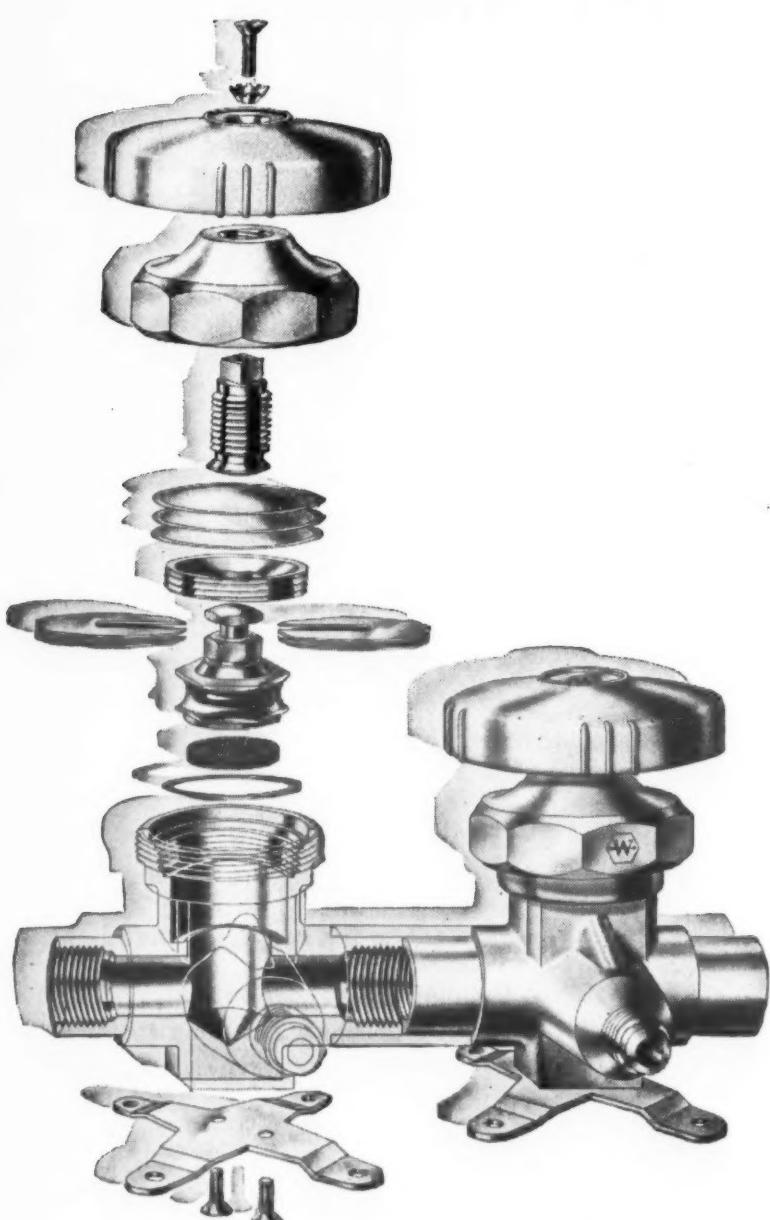
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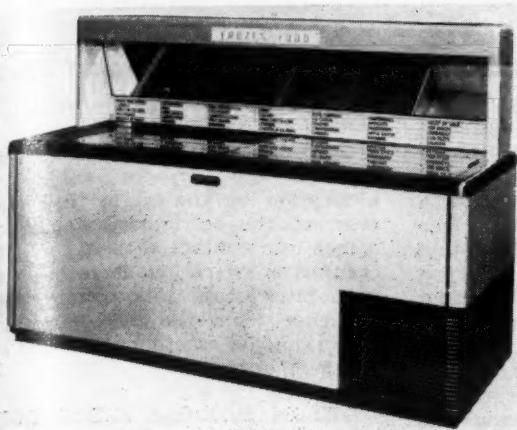


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What's New

Frozen Food Case Has Flexible Partitions



PHILADELPHIA — Haldorf Mfg. Co. here has recently introduced a frozen food display case, featuring "floating partitions," which make it possible for the merchant to adjust the number and size of the storage compartments, thereby providing for the minimum of waste space.

Using an 18-cu. ft. cabinet the manufacturer has added two parti-

tions, which may be located anywhere between the two stationary dividers, or eliminated entirely. In this manner the user can have from three to five compartments of varying dimensions to allow for economical storage of the many sizes of frozen food packages that are currently on the market.

Other features of the Haldorf case are its one-piece stainless steel top and track, frost-free, removable glass lids, and fluorescent lighting of the superstructure, according to the Haldorf company. Cabinet mounting of the 1/3-hp. compressor allows placement of the cabinet wherever it is most needed.

The case, which operates on 110 volts, a.c., is constructed of heavy gauge auto-body steel finished in white and trimmed with aluminum molding strip.

Tool Serves as Wire Cutter, Pliers, Gauge

HARRISBURG, Pa. — Aircraft-Marine Products, Inc., at 1435 North Fourth St. here, is manufacturing a pocket size combination wire stripper and wire cutter.

The new tool, which is suitable for use on wire sizes ranging from 22 to 10, is called the AMP "Yellow Jacket" because of its yellow shock-proof plastic handles, the manufacturer points out.

Incorporating a built-in wire cutter, serrated plier jaws, and a stud size gauge, the tool is said to eliminate the need for carrying one or more additional tools. The accurately sized stripping notches also serve as a convenient wire gauge. The tool retails for \$2.95.

3 Gem Waffle Iron Models Feature Washable Molds

NEWARK, N. J.—Newark Appliance Corp., Inc. here is currently marketing three new waffle iron models, all of which are said to feature the new washable molds.

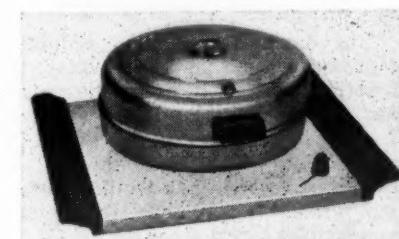
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HOTEL CLARIDGE
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Free Parking



Gem Automatic waffle iron.

The first model, known as "Gem Automatic," allows the user to select waffles baked to suit his taste by using the fully automatic finger-tip control, according to the manufacturer. The iron is mounted on a tip-proof tray type base, which it is said will not mar furniture. Surfaces are of stain-resistant chrome. Wood handles, finished in brown mahogany are designed to remain cool.

Special expansion hinges are said

Delivery Costs Cut by Big Ice Cream Storage Cabinet

SMYRNA, Del.—The third and latest new Wilson refrigeration product to reach the market this year, the Wilson "Zerosafe" ice cream storage cabinet, is now ready for shipment, John E. Wilson, Jr., president of Wilson Refrigeration, Inc. has announced.

"This new product has been designed to meet all the requirements for dependable low-temperature storage at the retail level and permits large-capacity storage in a minimum of floor space," Wilson said.

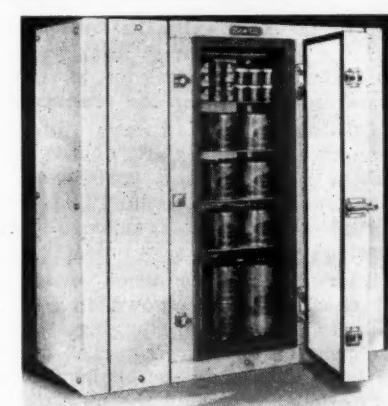
Prime purpose of this new cabinet is to reduce the number of deliveries and thus cut down delivery costs. The retailer is assured of an adequate stock and variety of flavors at all times. Overtime deliveries are avoided because the new ice cream

cabinet makes it possible to have a reserve stock of ice cream always available.

The Gem non-automatic model is said to contain all of the features and advantages of the automatic iron, with the exception of automatic operation.

Known as the Royal, the third model is identical to the second, except that the tray is finished with rich burgundy enamel.

The last two models mentioned can be operated on either a.c. or d.c., but the automatic model can only operate on a.c., according to the manufacturer.



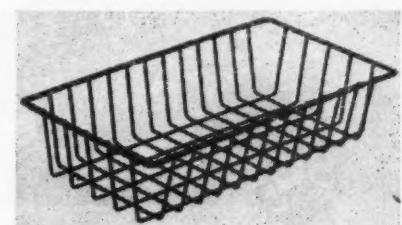
Delivery Costs Cut by Big Ice Cream Storage Cabinet

cabinet makes it possible to have a reserve stock of ice cream always available.

The storage capacity of the Zerosafe cabinet will permit storage of 56 2½-gallon cans plus 14 5-gallon cans. The model measures 35 in. deep x 82 1/4 in. wide x 76 in. high and all sections are assembled by short steel tie rods which are positioned through pockets with the tie rod couplings between sections, company specifications indicate.

'Rubbermaid' Refrigerator Basket Resists Scalding

WOOSTER, Ohio—A highly resistant rubber-coated refrigerator basket is now being offered by the Wooster Rubber Co. as an addition to its "Rubbermaid" line of housewares.



The Wooster Co.'s rubber-coated refrigerator egg and fruit basket.

Designed primarily for the storage of eggs and fruit, this new wire frame basket has a rubber coating said to withstand scalding water, soap, grease, and other substances harmful to ordinary rubber housewares.

The "Rubbermaid" refrigerator basket comes in three sizes with red or white coatings, it is reported by R. W. Marchand, assistant sales manager.

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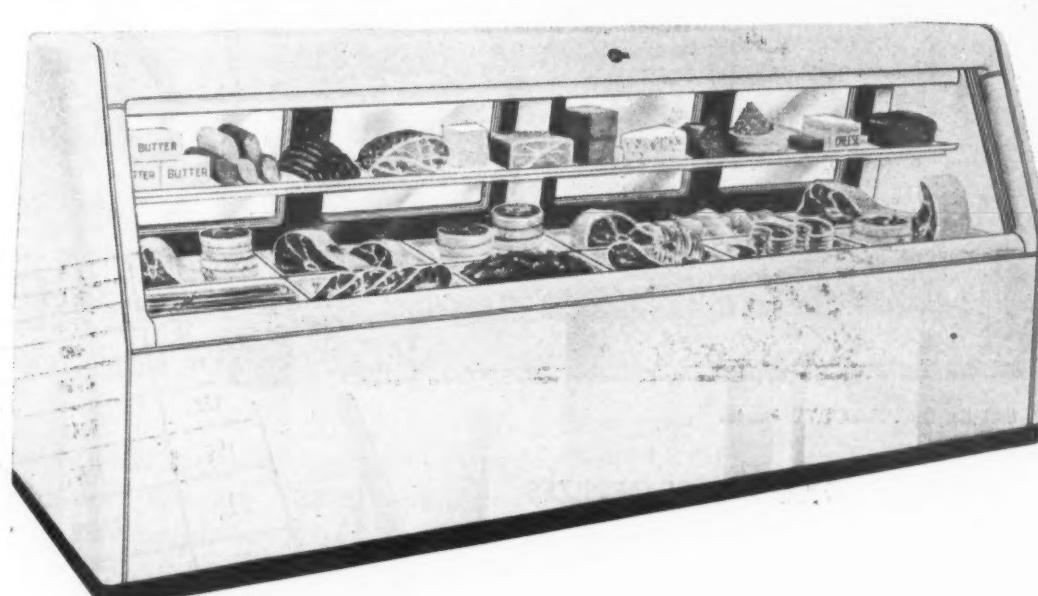
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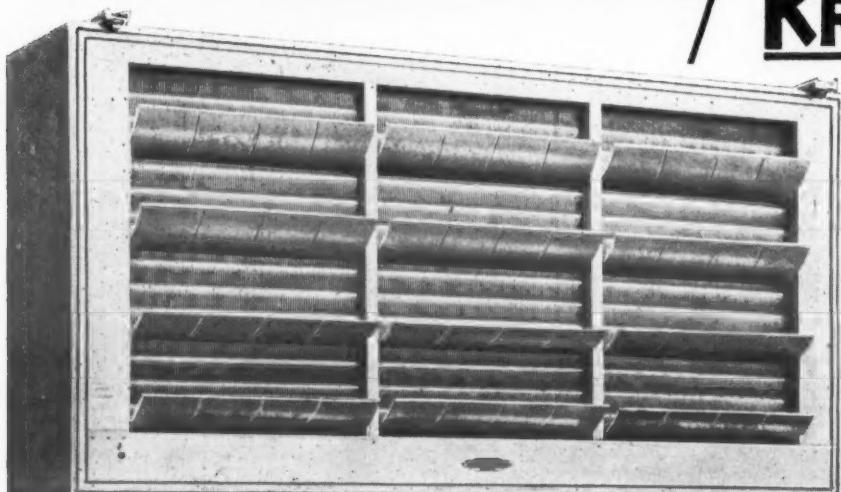
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212	10600		11900
265	13250		15900
360	18000		27000
480	24000		36000
720	36500		54750

Refrigeration Problems

And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

The Oil Cycle (8)

NORMAL OIL PUMPING

The normal passing of oil through the cylinder and discharge valves is not to be confused with "oil pumping" or "oil-sludging" that results from the violent boiling out of refrigerant from the oil in the crankcase.

Oil-sludging is always directly connected with and caused by violent agitation and turbulence of the crankcase oil, usually due to abrupt changes of crankcase pressure.

There are times when even an oil check-valve as shown in Fig. 9 cannot prevent oil-sludging; when the percentage of refrigerant in the oil is so great and the oil level is so high, that stirring up the mixture by the crankshaft and rods physically throws so much of the mixture on the cylinder walls and the warm walls of the crankcase, that oil-sludging is inevitable.

It will be remembered that one of the main reasons for the heavy percentage of refrigerant in the crankcase oil is that the oil is cool during the off-cycle. In our example we

assumed that the crankcase oil got down to 60° by the start of the next running cycle. This would be normal in an ordinary cool basement.

If the condensing unit were in a room that was kept at 80°, then there would not be as much methyl chloride absorbed into the oil, for, from the chart in Fig. 7 we see that on the 80° curve, a pressure of 26 p.s.i.g. corresponds to only 10% instead of 16%. The quick reduction of 10 p.s.i. from 26 to 16 would, at 80° result in a reduction from 10 to 6%—only 4%. This would cause much less turbulence and oil-sludging than previously shown.

WET GAS CARRIES OIL

Conversely, if the unit is in a very cool basement, so that by the time the compressor is ready to start the oil is down to 40°, the pressure of 26 p.s.i. would cause the oil-refrigerant mixture in the crankcase to be about 50% refrigerant and 50% oil. At 16 p.s.i.g. it would be about 17% refrigerant and 83% oil.

Thus during the abrupt reduction of pressure from 26 to 16 p.s.i.g., the oil-refrigerant mixture in the crankcase would have to give up about $\frac{1}{2}$ of itself; or over $\frac{1}{2}$ a pound of methyl would boil out of the oil. As can be imagined, this would cause a very violent turbulence that would cause violent "oil-sludging."

Therefore, the location of the crankcase and consequently of the condensing unit is a very important factor in "oil-sludging."

REFRIGERANT CONDENSED INTO CRANKCASE

If the crankcase is in a location in which the temperature is lower than that of the evaporator, the refrigerant will, quite naturally, condense from the evaporator into the crankcase. If there is enough refrigerant in the evaporator and there is enough time between runs, that is, if the idle cycle is long enough, the crankcase may entirely fill with condensed liquid. This liquid refrigerant, if it is the oil-miscible type, will mix with

the oil to form a mixture that is almost all refrigerant.

However, this has no direct bearing on our present subject of absorption by the oil in the crankcase, of the refrigerant vapor that comes into contact with it, for if the crankcase were colder than the evaporator the refrigerant would condense from the evaporator into the crankcase whether there was any oil there or not.

OIL IN HOT-GAS DISCHARGE

We have recognized that even during normal operation, with the compressor designed with an oil check-valve, bleeder tube and oil reservoir, there will be some passage of oil through the cylinders, through the discharge valves and into the condenser. How much this is, depends on a number of factors, as we have seen. But in any event there will be some oil circulating with the refrigerant all the time. It would be well to trace it further throughout the system.

When the gas leaves the cylinder and passes through the discharge valve into the condenser, it has been raised from an average pressure of about 13 p.s.i.g. to about 86 p.s.i.g. if we assume a condensing temperature of 90° F., which is about what we would have if the condenser is an air-cooled one, and the room temperature is about 60°.

Of course the gas leaving the compressor is much hotter than 90°. If we assume that the vapor in the evaporator at 17½° is superheated to 65° before it gets into the cylinders, then the hot, compressed gas leaves the compressor at about 220°. It does not start to condense until it loses the heat of compression from 220° down to 90°.

While the methyl is in this hot, compressed form, the oil is in a fine mist and is mixed with and carried along with the hot gas.

When in the condenser, the hot gas cools down to 90° and starts to condense into a liquid, the oil dissolves into the liquid, for again referring

(Continued on next page)

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type compressor parts.

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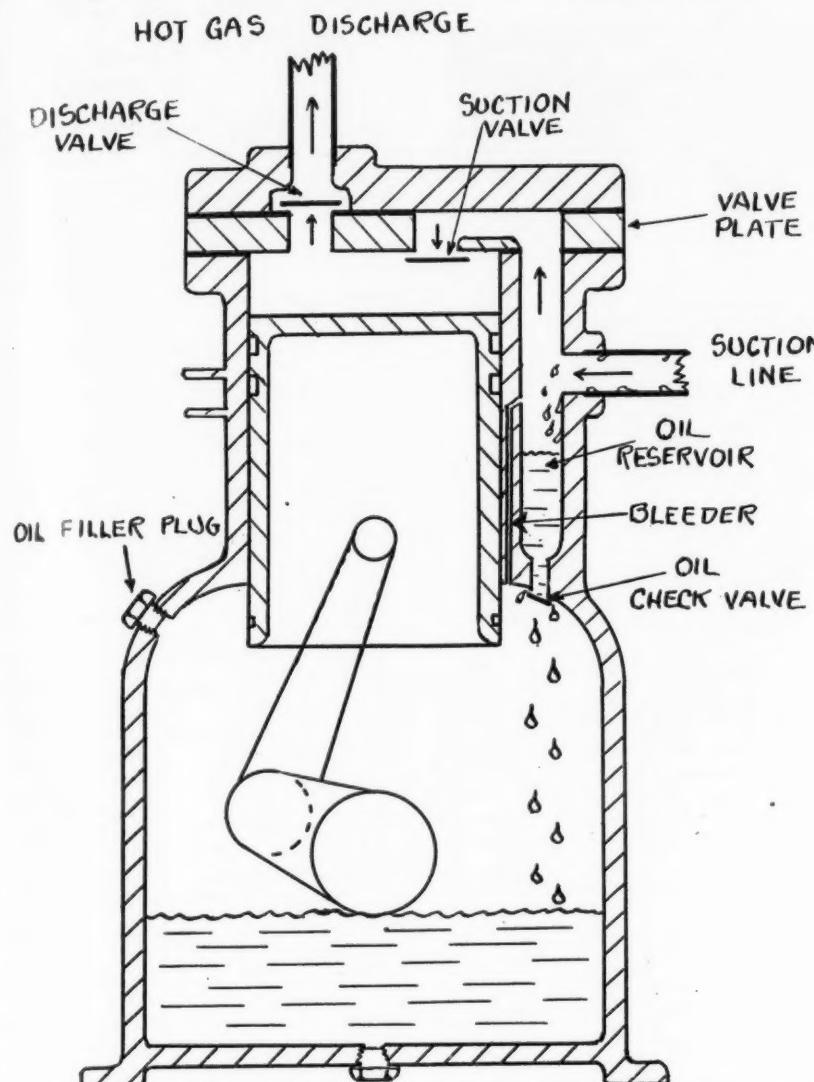
Fig. 9—Compressor with Oil Check Valve

Fig. 9—Compressor with oil reservoir, oil check valve, and bleeder passage; discharge and suction valves in valve plate.

How Oil Gets Into the Refrigerant and What Happens In a System When It Does

(Continued from preceding page)

to our chart in Fig. 7, we find that at 90° temperature and at 86 p.s.i.g. pressure, the mixture can be 65 or 70% oil. It will not be that heavy a percentage of oil however, for if the compressor is properly designed and in good condition, it will not be passing enough oil to allow that much oil in the refrigerant at that point.

OIL IN THE RECEIVER

The liquid refrigerant leaving the condenser and in the receiver would normally not have more than 5 to 10% oil in it. It could be much more, especially if the compressor is "slugging oil," possibly over one-half would be oil. On the other hand, it would not often be less than 5%. No two installations would be exactly alike as far as the amount of oil in solution in the refrigerant at any one place in the system is concerned.

OIL IN THE LIQUID LINE

A small amount of oil in the liquid does no great harm. Of course it takes up room in the liquid line that could be used for refrigerant, so it thereby reduces the capacity of the liquid line. This is also true of the expansion valve or of a solenoid or other valve. But, if there is only a small amount of oil in the refrigerant any effect it may have of reducing the capacity of the line valves would probably not be noticeable.

However, a percentage of more than 10% oil in the liquid refrigerant would have to be considered, whether it is methyl chloride or some other refrigerant, for it might require using an extra-size liquid line or expansion valve, so that enough liquid refrigerant to provide the required refrigeration would be available, despite the loss of capacity due to the presence of the oil.

OIL RELEASED IN EVAPORATOR

When the refrigerant gets into the evaporator, bearing its 5 to 10% oil, the refrigerant "boils" and, by the time it gets almost through the evaporator, has changed to a vapor. As long as there is any liquid refrigerant left, the vapor will be "saturated" and at the same temperature as the boiling liquid refrigerant, in this case 17½° corresponding to the average suction pressure of 13 p.s.i.g.

Before it leaves the evaporator it has warmed up (superheated) somewhat above the 17½°,—probably to about 25°. In the suction line it superheats another 40° so that by the time the vapor arrives at the compressor, it is up to 65°.

When the liquid refrigerant "boils" or turns into a vapor, it drops most of its oil. A little oil is carried along in the vapor, but most of it is separated out into a liquid that has

some refrigerant absorbed into it.

Our chart in Fig. 7 shows that since the oil is quite cold, (about 17½°) and the pressure is 13 p.s.i.g., the amount of refrigerant in the oil is over 50%.

VAPOR DRAGS OIL ALONG

However, before the oil gets back to the compressor, it has warmed to about 65°, so our chart shows that the mixture would then contain only about 7% methyl chloride and the rest, 93%, would be oil.

The oil is "dragged" along the inside of the evaporator tubes by the vapor flowing through the tube. The higher the velocity of the vapor, the faster will the oil be moved along. We want the oil to be moved along and out of the evaporator as fast as it is dropped out of the refrigerator, as the latter vaporizes.

(To Be Continued)

Mushrooming Appliance Sales Seen for Jamestown

JAMESTOWN, N. Y.—William S. Hake was re-elected to the presidency of the Jamestown Electrical Dealers Association at the annual meeting in Jamestown, N. Y. Elected to the vice presidency was Marvin A. Chindgren. Secretary and treasurer for the new term are John Johnson and Windfield Ayers, respectively.

Hake estimated that in the next 10 years about 8,500 special electrical services would be installed to accommodate the more advanced type of appliances, 10,000 electric dryers would be sold, 8,000 ironers, 3,500 ranges, 5,000 toasters, 7,500 dishwashers, 7,500 electrical disposal units, 10,000 radios, and 8,000 washers in Jamestown alone.

YOU'VE GOT OUR NUMBER!

(BOOTHS 310-312)

AT THE

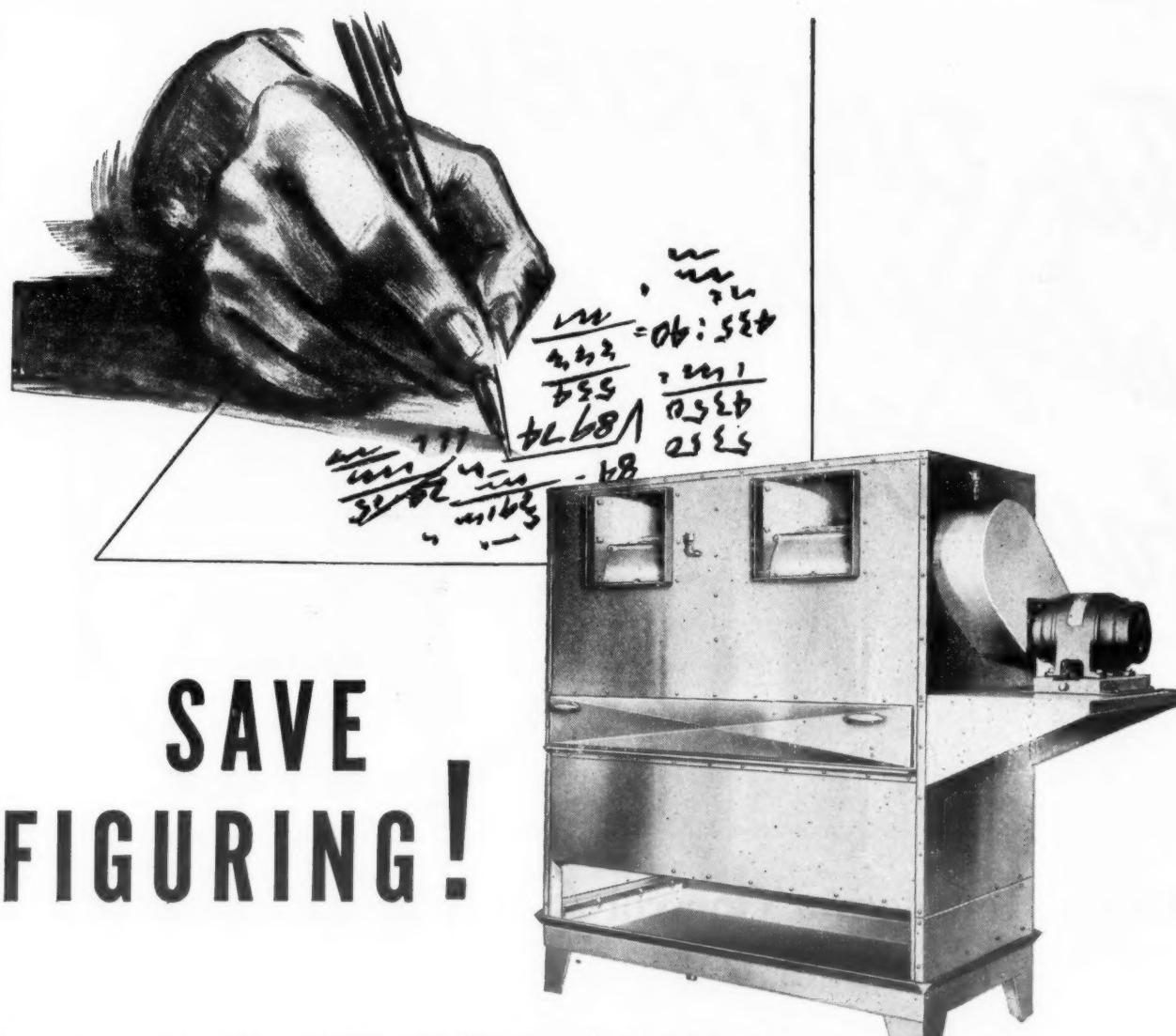
Cleveland
ALL-INDUSTRY SHOWRanco Inc.
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There'll be lots to see at this year's show, but you won't want to miss the Ranco exhibit! Whether you want to see and discuss the latest developments in refrigeration controls, or just relax for a bit and discuss things in general, we'll give you a hearty welcome!

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Eureka Williams Nets \$209,267 In Quarter

DETROIT — Net earnings, after taxes, of the Eureka Williams Corp., Bloomington, Ill., for the first quarter of the fiscal year, ended Oct. 31, were \$209,267, an increase of \$29,380 over the comparable quarter of the last fiscal year.

The corporation manufactures and markets Williams Oil-O-Matic oil heating equipment and Eureka vacuum cleaners, cordless electric irons, and the Dispos-O-Matic electric home garbage disposal unit. The quarterly report also included earnings of the corporation's subsidiary, National Stamping & Electric Works, Chicago, maker of White Cross table electric appliances.

A new sales record was established for the quarter in the Williams Oil-O-Matic Division when both unit and dollar sales reached the highest mark in Oil-O-Matic history.

The expansion of plant facilities in Bloomington enabled the Eureka Division to fully supply dealers with vacuum cleaners so that these products are now available for immediate delivery in stores and most sections of the country today, Burritt stated.

Foreign Business Practice Described In C. of C. Booklet

WASHINGTON, D. C.—"Doing Export and Import Business," a publication recently issued by the Chamber of Commerce of the United States, describes the accepted methods and practices in buying and selling abroad. Copies are available from the organization's foreign commerce department.

The **KEY to AIR CONDITIONING**

One of a series from
by James J. LaSalvia

Refrigeration Cycle (Cont.)

EXAMPLE NO. 3

Given: a heat gain of 231,000 B.t.u. per hour. Compressor is to operate with a cooling tower. Outside wet bulb temperature is 75° F. What is the size of compressor, suction temperature, condensing pressure, amount of condensing water per hour, kw. input per hour, and amount of make-up water per hour, using a 10° rise in condensing water temperature? For 5° rise?

Total 231,000 B.t.u. less 10% = 209,000 B.t.u.

Outside wet bulb 75° + 5° = 80° assumed condensing water temperature.

Using 209,000 B.t.u. and 80° water temperature, refer to Chart 2.

For 20° condensing water rise, results are:

1. Use a 15-hp. compressor.
2. Capacity = 209,000 B.t.u. per hour.
3. Suction temperature = 41° F.
4. Condensing pressure = 132.5 x .85 = 113 lbs.
5. Condensing water = 1,680 x 2.5 = 4,200 g.p.h.
6. Input per hour = 15.3 x .90 = 13.8 kw.
7. Make-up water per hour. This is taken as 5% of total water used: .05 x 4,200 g.p.h. = 210 g.p.h.

This 210 g.p.h. represents the water that is evaporated at the cooling tower to the atmosphere and must be added to the system. This is usually taken from the city water line.

For 5° condensing water rise, results are:

1. Use a 15-hp. compressor.
2. Capacity 196,350 + 15% = 231,000 B.t.u. per hour.
3. Suction temperature = 38° F.
4. Condensing pressure = 131.4 x .80 = 105 lbs.
5. Condensing water = 1,590 x 5 = 7,990 g.p.h.
6. Input per hour = 14.1 x .87 = 12.27 kw.
7. Make-up water per hour = .05 x 7,990 = 399.5 g.p.h.

CONDENSER

Condensers in general are of the shell and tube type, where the condensing water flows through the tubes, and the refrigerant is around the tubes. (See Fig. 4.)

The condenser may also be the receiver, as when the compressor is stopped all the refrigerant is stored in the condenser until the compressor is started once more, which action will distribute the refrigerant to all parts of the system.

It is necessary on all systems, to see that the condenser or receiver shall be capable of storing all of the refrigerant from the entire system when the system is pumped down at the end of the cooling season.

If the receiver is not large enough to accomplish this it will be necessary to provide an extra receiver to store up the excess. At the end of a

cooling season the system is usually pumped down, and the refrigerant is stored to be used once again the following season.

Generally, the condenser is not operated over 175 lbs. pressure, but if it should go over this pressure, it is automatically controlled by the high pressure switch. This stops the compressor until the pressure falls again below this pressure when the compressor will start once more. This will occur when there is not sufficient amount of condensing water, or when motor is too small to carry the load.

There is also another safety feature if the pressure goes beyond 175-lb. pressure and the high pressure switch does not function. That is a relief valve set at about 200 lbs. If the pressure should reach this figure, the relief valve will open and relieve the pressure. By so doing the oil and refrigerant in the condenser are lost to the atmosphere, and a complete new charge of oil and refrigerant is required before the compressor is started.

The water connection to a condenser should be such that the inlet is at the bottom and water outlet at the top of condenser. The increase in temperature of the water through a condenser will vary according to the temperature and quantity of water used. This rise will vary between 10° and 25° F.

When city water is used for condensing purposes, an automatic water valve is used at the entrance to the condenser. This water valve controls automatically the amount of water that is to be used. When the compressor is stopped, the water valve closes, and when the compressor is started, the water valve is opened.

When a water-saving device is used as an evaporative condenser, the compressor is used without the conventional condenser. (See Fig. 5.)

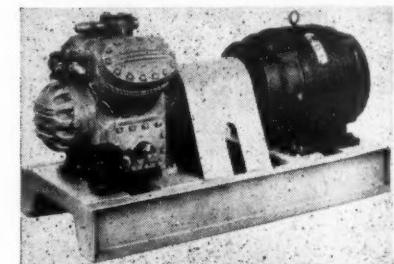


Fig. 5—With an evaporative condenser the conventional condenser is omitted from the compressor unit as shown in this Carrier Corp. machine.

In this case the condensing is accomplished in the evaporative condenser. Also no automatic water valve is used.

When a water-saving device such as a cooling water tower is used, the water valve is also eliminated.

(To Be Continued)

Fig. 4—Typical Two-Pass Horizontal Shell-and-Tube Condenser

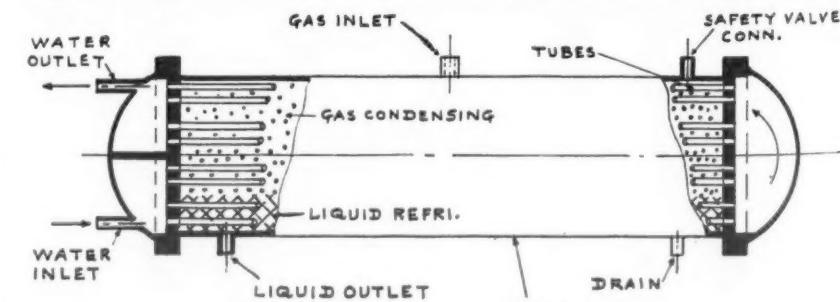
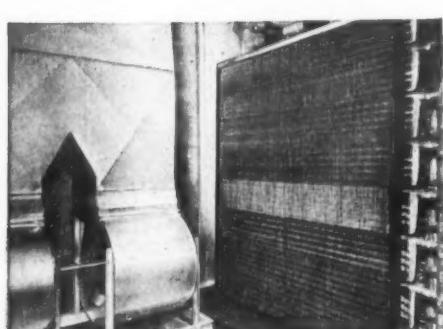


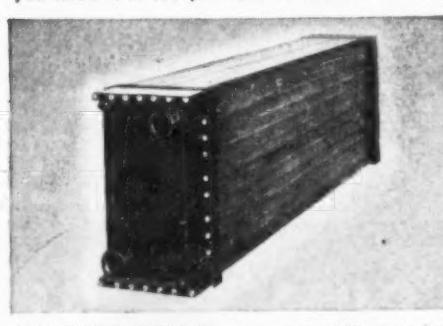
Fig. 4—In this typical two-pass horizontal shell-and-tube refrigerant condenser often employed on large air conditioning installations condensing water passes through tubes which are surrounded with refrigerant.

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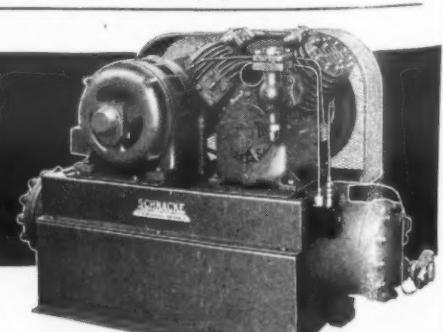
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'Facts vs. Fallacies' Is New Pamphlet About Oil Supply

TULSA, Okla.—Protesting that there is no oil shortage in the United States, the Independent Petroleum Association of America has published an eight-page pamphlet on "Oil—Facts vs. Fallacies" to counteract certain misconceptions the public has on the state of our crude oil supply.

Charts and figures are used to prove the five points discussed in the booklet. These points are:

1. The war did not drain our oil resources. Production, said the pamphlet, followed a normal upward trend during the war years. Approximately the same quantities would have been used had there been no war.

2. There is no shortage of oil. "Discoveries of new reserves are continuing," the booklet declared. "The volume now known equals 22 billion barrels, an all-time peak."

A total of 55 billion barrels has been discovered, with at least as much more yet to be found. The known supply is sufficient for thousands of years, it added.

3. Drilling for oil is below normal. Approximately 67,000 wells were not drilled during the past five years that normally would have been drilled to meet rising demands. Oil producers are not able to obtain enough oil steel tubular goods to meet their current needs, it indicated.

4. Reserves now being added per foot drilled are larger than prewar. During the last year, over 28 barrels of new reserves were added for every foot drilled—above the prewar average of 25.6 barrels per foot of drilling, the booklet explained.

"The hunting ground for oil in the United States covers over 1,500,000 sq. mi. as contrasted with less than 10,000 sq. mi. under which we have located the oil so far discovered," it stated.

5. It is unnecessary and dangerous to depend on foreign sources of oil. A proper national petroleum policy can keep the United States a land of plenty as to petroleum products.

ASHVE Sets Up New Research Program On Panel Heating and Cooling Methods

CLEVELAND—Members of the ASHVE Committee on Heat Distribution Within and Behind the Panel, meeting here last month, initiated specific recommendations for the society's planned program of panel heating research.

The committee, operating as a part of the ASHVE Technical Advisory Committee on Panel Heating and Cooling, has presented its recommended program to the society's Committee on Research.

L. N. Hunter, committee chairman, stated that "the phase of the over-all program as recommended by this committee is designed to determine experimentally the heat distribution within and behind both concrete and plaster panel construction as influenced by the type, size, and spacing of the conductors, the depth of cover, the properties of the materials composing the panel, the temperature of the heating medium, and the type and thickness of covering or insulation above and below the panel surfaces.

In deciding upon this recommendation, the committee believes that the proper approach is to evaluate scientifically all factors affecting the performance of a panel heating system."

It was further stated that a survey of all known published data on the effective heat output of concrete and plaster panels using ferrous and non-ferrous pipes had been completed by the Research Laboratory staff and that the program presented for this committee's examination was based upon that study. Results of the staff survey showed that under identical conditions of pipe size and spacing, depth of cover and water temperatures, the stated heat output varied over a wide range.

The committee meeting in Cleveland was one of four such groups, each of which is being established to cover a specific phase of the program.

Hunter, vice president, The National Radiator Co., is chairman of the committee. P. B. Gordon, vice chairman, is treasurer of Wolff & Munier, Inc., New York City. Mem-

bers of the committee include: Prof. A. B. Algren, University of Minnesota; R. A. Biggs, Pittsburgh Corning Corp., Pittsburgh; Wharton Clay, secretary, National Mineral Wool Association, New York City; R. S. Dill, National Bureau of Standards, Washington, D. C.; H. L. Flodin, Portland Cement Association, Chicago; Dr. F. E. Giesecke, consulting engineer, New Braunfels, Tex.; Prof. W. S. Harris, University of Illinois; Prof. C. F. Kayan, Columbia University; George D. Lain, American Iron & Steel Institute, New York City; R. S. Leigh, Chase Brass & Copper Co.; C. W. Meiningen, Aluminum Co. of America; D. L. Mills, Revere Copper & Brass, Inc.; C. W. Nessell, National Warm Air Heating and Air Conditioning Association, Cleveland; Paul S. Park, A. M. Byers Co., Pittsburgh; S. I. Rottmayer, Samuel R. Lewis & Associates, Chicago; S. M. Van Kirk, technical secretary, Insulation Board Institute, Chicago; and L. H. Yeager, general manager, Gypsum Association, Chicago.

The second group will relate its considerations to Heat Transfer Between the Panel and the Space. John James, research engineer, the Iron Fireman Mfg. Co., Cleveland, is chairman.

The third group which will deal with controls includes as chairman, J. S. Locke, sales manager, Air Conditioning Controls Division, Minneapolis-Honeywell Regulator Co.

Physiological aspects of the problem will be considered by yet a fourth element.

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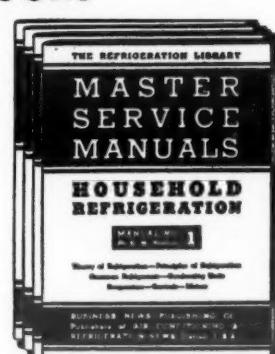
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MANUAL NO. 1—The theory and principles of refrigeration explained in simple terms. Characteristics of common refrigerants. Construction and operation of the major component parts of a household refrigerator. 144 pages. 114 illustrations. 6 tables and charts. Price \$1.00.



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SERVICE INFORMATION

MANUAL NO. 4—Service information on 12 makes of household electric refrigerators including Absopure, Apex, Atwater Kent, Coldspot (Sunbeam and Sears), Copeland, Dayton (Niagara), Fairbanks-Morse, Graybar Ig-Kold, Iceberg, Liberty, Rice, and Servel. 129 illustrations. 128 pages. Price \$1.00.

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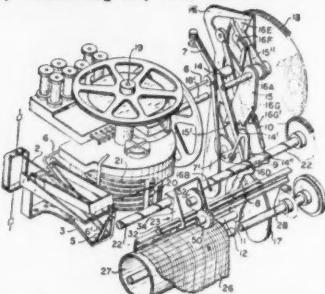
Evaporative
Kooler-aire

THE MAGIC WORKER IN LOW COST COMFORT COOLING

PATENTS

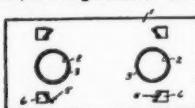
Week of September 30

2,428,129. TEMPERATURE MEASURING SYSTEM. Edgar M. Smith, Trenton, N. J., assignor to The Brown Instrument Co., Philadelphia, Pa.



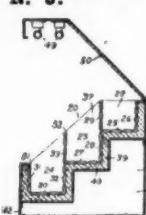
1. In a recording system, a multiple recording instrument having recording means and mechanism to operate said recording means, a plurality of condition responsive elements, means to connect said elements to said instrument in sequence, a plurality of circuit closing members, one for each element, means to move one of said circuit closing members to circuit closing position each time an element is connected to said instrument, a circuit in which each circuit closing member is located, means common to each circuit and operated upon opening of the circuit to restrain the recording means of said instrument from making a record, and other means common to each circuit and operated by said mechanism to open the circuit which was closed when a record is made to thereby open said circuit whereby said common means can restrain operation of recording means.

2,428,145. HEAT TRANSFER FIN. Lawrence H. Cook, Menlo Park, Cal., assignor to Pacific Metals Co., Ltd., San Francisco, Cal., a corporation of California.



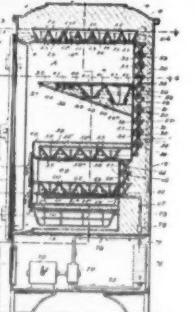
1. A heat transfer fin comprising a flat plate having spacing lugs struck therefrom and projecting from one side thereof at right angles thereto providing an opening in said plate adjacent each such lug having an outline corresponding to that of the latter, the longitudinal axis of each lug being at right angles to the plane of said plate and said lugs being symmetrically arranged relative to the center of said plate, the outer end edge of each lug extending angularly relative to the base edge of said plate for extending angularly across the base edge of the corresponding lug of a similar plate adapted to be positioned alongside said plate in opposition thereto.

2,428,243. REFRIGERATOR DISPLAY AND STORAGE FIXTURE. Walter Baskin, Orange, N. J.



1. A refrigerated display case open at the top and having heat insulated walls, said case comprising a plurality of tiered compartments, said compartments being formed by a plurality of refrigerated spaced partition members extending longitudinally of the display case.

2,428,312. REFRIGERATOR. Henry M. Herbener, Thomasville, Ga.



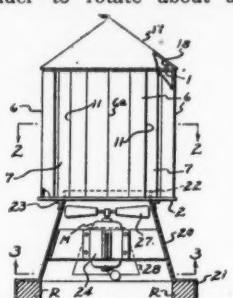
5. In a refrigerator, a double wall casing, tanks arranged within the double wall for holding a liquid freezable medium, refrigerating means for the tanks and arranged within the double wall casing, a double wall shelf arranged within the casing and providing a passage for the circulation of air within the casing, said shelf having an upper heat conducting wall, tanks arranged within the double wall shelf for holding liquid freezable medium, refrigerating means within the double wall shelf and disposed adjacent to the last named tanks, a heat insulated compartment mounted within the casing and providing a passage for the circulation of air within the casing, said compartment including a cold chamber and an ice cube chamber, a plurality of tanks for holding a liquid freezable medium disposed within the heat insulated compartment at the top of the cold chamber, refrigerating means for the last named tanks, a plurality of tanks for holding a liquid freezable medium.

Week of October 7

2,428,544. VENTILATOR. George C. Breidert, Glendale, Cal.

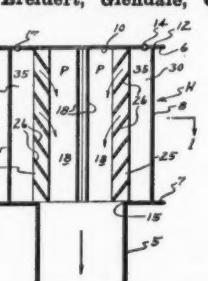
1. A ventilating device for exhausting air from a structure, comprising a conduit adapted to be secured over an opening in the structure, said conduit tapering from its bottom to a cylindrical discharge end portion, a ventilator comprising top and bottom walls spaced apart by concentric rows of circumferentially spaced, vertically disposed baffles, said bottom wall having an axial opening into which the cylindrical portion of the conduit projects, a spider secured to the side

wall of the tapered portion of the conduit and disposed transversely of the conduit, an exhaust fan member supported by the spider to rotate about an axis



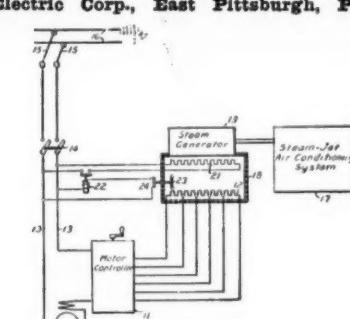
coaxial with the conduit, said fan being disposed in the top end of the tapered portion immediately adjacent the cylindrical portion of the conduit.

2,428,545. INTAKE VENTILATOR. George C. Breidert, Glendale, Cal.



A ventilating device for introducing air into a structure, comprising top and bottom end walls, the bottom end wall having an axial opening therethrough, a vertically disposed substantially annular inner wall mounted between the end walls and defining an axial passageway communicating with said opening, a circumferential row of V-shaped outer baffles surrounding the inner wall in radially spaced relationship thereto and being laterally spaced apart to provide air-admitting openings therebetween, the outer baffles being substantially V-shaped in cross-section and each having its apex disposed outwardly, said inner wall having portions providing circumferentially spaced rows of flues, which respective rows have their inlet ends opposite the respective outer baffles and have their discharge ends opening into said passageway, vertically disposed wall members extending radially from medially of said respective rows of flues to the apex of the respective outer baffles, vertically extending wall members projecting radially from points medially between adjacent rows of flues outwardly through said respective openings between the outer flues, and vertically extending wall members disposed radially from the longitudinal axis of the first-mentioned passageway and dividing said passageway into separate axially disposed conduits each communicating with a row of flues.

2,428,561. VEHICLE AIR CONDITIONING SYSTEM ENERGIZED BY BRAKING RESISTORS. Edward B. Fitzgerald, Pittsburgh, Pa., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa.



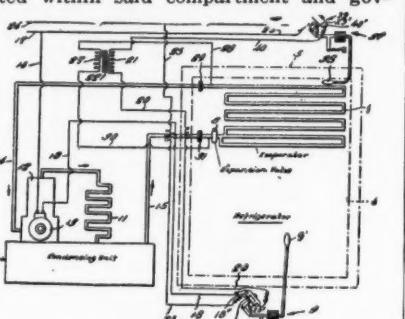
1. An electrically propelled vehicle having an air conditioning system of the steam jet type for cooling the vehicle, in combination, a motor for propelling the vehicle, control means for controlling the operation of the vehicle, resistance means for controlling the motor current, an enclosure for the resistance means, and means associated with the enclosure for utilizing the heat from said resistance means to generate steam for operating said air conditioning system.

2,428,667. LOW-VOLTAGE DEFROSTING DEVICE. Robert E. Henriquez, Monroe, Wis.

In combination, a refrigerating device for a temperature between 0° and minus 20° C., consisting of a vaporizing device having its terminals electrically insulated and including an evaporator coil and an expansion valve connected to said coil, a compartment in which said evaporator coil and expansion valve are located, and exteriorly to said compartment an electric power supply, a compressor, an electric motor having one side connected to one wire in the circuit of said power supply, a condenser having a condenser coil connected at one end with the discharge side of said compressor, receiver connected with the other end of said condenser coil, a suction pipe connecting one of said insulated terminals with the intake side of said compressor, and an outlet pipe from said receiver connecting with the vaporizing device at the other insulating terminal of said vaporizing device, a step down low voltage transformer having the terminals of its secondary connected one to each of said insulated terminals thereby to heat said vaporizing device.

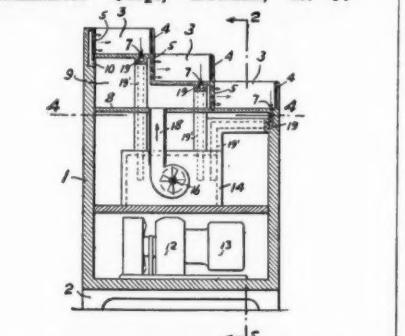
147,622. DESIGN FOR A REFRIGERATED DISPLAY CASE. John G. Rideout, Chagrin Falls, Ohio.

ing device between its terminals, a thermo-control switch including a tiltable mercury tube having thermo-bulb located within said compartment and gov-



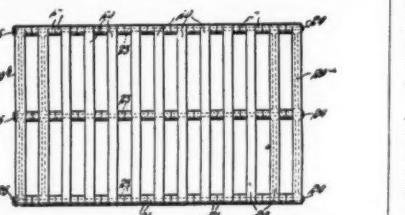
erning the tilting of said tube, said tube having two end contacts and a central contact alternately connected with one of the end contacts or the other according to the tilted position of said tube, one of said end contacts having wire connection with the other side of said motor and the other end contact having wire connection with the primary of said transformer and the central contact having wire connection with said electric power supply.

2,428,717. REFRIGERATED DISPLAY CASE HAVING TOP ACCESS COMPARTMENTS. Charles F. Moores, Philadelphia, Pa., assignor, by mesne assignments, to Freshmaster Corp., Newark, N. J.



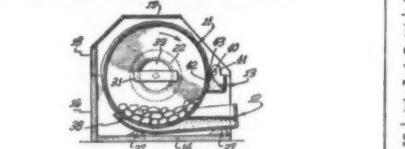
1. A display device comprising a cabinet having its top formed by a series of open bins in stepped formation, the bins respectively having opposite side walls and front and back walls, a series of perforations in the back walls of the bins directed toward the front walls, a series of perforations in the bottoms of the bins adjacent to the front walls, a chamber in the cabinet below the bins in communication with the perforation in the back walls of the bins, a second chamber in the cabinet, a cooling device in said second chamber, ducts affording communication between said perforations in the bottoms and a fan arranged to draw air from said second chamber and discharge it into said first mentioned chamber.

2,428,718. SHELF FOR REFRIGERATOR CABINETS. Carl H. Nauert, Evansville, Ind., assignor to Servel, Inc., New York, N. Y.



2. A shelf for a refrigerator comprising a plurality of sections, each section consisting of an elongate portion having a substantially straight upper surface and a boss at each end of said elongate portion, each boss having its upper surface flush with the upper surface of said elongate portion and having a passage perpendicular to said elongate portion, and tie rods located in said passages and fastened to the said plurality of sections into an openwork shelf.

2,428,736. QUICK-FREEZING DEVICE. Lyle J. Casmire, Los Angeles, Cal.



1. A quick freeze device comprising a rotatable refrigerant-containing freezing drum, means for supplying liquid to the surface of the drum, a receiving container having a wall substantially conforming to said surface and arranged in close proximity thereto, to be in heat transfer relation thereto.

147,623. DESIGN FOR A REFRIGERATED DISPLAY CASE. John G. Rideout, Chagrin Falls, Ohio.



SERVICE AND SALES REPRESENTATIVES WANTED

by the oldest manufacturer of "All-Electric" FROZEN CUSTARD MACHINES and EQUIPMENT . . . for all sections of the United States and Canada.

We require organizations with experience in Commercial Refrigeration Service and Sales who are willing to do missionary work as well as follow up on inquiries. Commissions plus installation and service charges.

Please reply with details of organization and experience.
GENERAL EQUIPMENT SALES Incorporated
814-824 S. WEST ST.

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POSITIONS WANTED

REFRIGERATION MANUFACTURERS—

Do you want experienced representative for Middle-Western group of states: Iowa, Kansas, Missouri, and Nebraska? Will consider valves, insulation, compressors, controls, accessories. BOX 2574 Air Conditioning & Refrigeration News.

REFRIGERATION SERVICE engineer, age 43, married, 23 years varied experience low and high pressure single and two stage "Freon" and ammonia; in air conditioning milk cooling, ice cream cabinets, etc., as Service Manager. Now Chief Engineer large ice cream plant. Prefer South or Southwest. Will travel. BOX 2587 Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

MANUFACTURERS AGENT for well known line of soldering equipment, including refrigeration leak detector. Must be contacting refrigeration trade on national basis. Send all particulars first to: LENX MFG. COMPANY, 30 Cummington Street, Boston, Mass.

WANTED—AIR conditioning and refrigeration sales engineer for Chicago and surrounding territory. Applicant must have experience and be qualified to estimate jobs. Position permanent with old Chicago concern dealing in ammonia and "Freon" equipment. Reply giving full particulars regarding yourself, also experience and salary expected. BOX 2529 Air Conditioning & Refrigeration News.

FACTORY REPRESENTATIVES wanted by leading manufacturer of complete low side and condenser lines. Company products are nationally advertised and enjoy excellent reputation. Territories now open Southeast, Central, South Central and Northeast. Our men have been informed of this ad. BOX 2561 Air Conditioning & Refrigeration News.

INSTRUCTOR WANTED to teach refrigeration servicing on a full-time basis in a private trade school in New York City. Thorough experience in refrigeration plus ability to teach theory and practice in commercial and domestic work is essential. Reply in detail to BOX 2581 Air Conditioning & Refrigeration News.

DESIGNER FOR commercial refrigerators to design display cases, reach-ins, beverage coolers and freezers. Must have at least 5 years experience. Good opportunity with very progressive refrigerator manufacturer in Philadelphia area. State qualifications, previous employment and salary desired. BOX 2591 Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

MOTORS AND condensing units—available at once— $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$, $\frac{1}{32}$ Universal condensing units with or without motors. Special—six hole ice-cream cabinets with $\frac{1}{4}$ hp. Copeland units less motors \$225. Also beverage coolers, beer equipment, stainless steel reach-in freezers. ALBROD CORP., 319 West 48th St., New York City 19, CI 6-9100.

SILICA JEL—Limited quantity available @ 20¢ per lb. in 25 and 100 lb. lots. Packed in sealed tins and guaranteed moisture free. Also $\frac{3}{4}$ I. P. by $\frac{1}{2}$ flare aluminum couplings \$5.00 per hundred. Send check or money order to BROWN'S SURPLUS SALES, De Kalb, Illinois.

FOR SALE: Six 30" x 144" Dole Freezer standard shelf plates with stand. (New in crates). THE CHRISTIAN PETERSEN & SON CO., Hartford 1, Conn.

FOR SALE: One Mario model EC3 evaporative condenser, 1 phase, 60 cycle with receiver and valves. (New in crates). THE CHRISTIAN PETERSEN & CO., Hartford 1, Conn.

SELLING OUT: used (as is) and rebuilt Frigidaire and Kelvinator condensing units with new a. ph. capacitor motors. Write for list. EDISON COOLING CORP., 310 E. 149th Street, Bronx 51, N. Y.

QUALITY BOBTAIL fountains; reach-ins, walk-in boxes—wood, metal; dough retarders; double duty cases—stainless steel, porcelain; dairy, florist, bakery cases; ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stainless steel back bars; with machines. Equipment made to special order. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, MA 2-9093.

OUTSTANDING CLOSE-out values. All motors standard makes. Prices and complete description on request. $\frac{1}{2}$ HP, AC & DC, 3, 5, 10, 15, 20 and 25 HP, 250 v. 440 v. 50-60 cycle, 3 phase, 208 v. 60 cycle, etc. 10-15% off list. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, MA 2-9093.

OUTSTANDING CLOSE-out values. All new and nationally-known equipment. Complete description on request. 5 HP water cooled compressors complete \$425; 10-ton air conditioning low-side floor type \$590; 20-ton air conditioning low-side floor type \$850; other compressors $\frac{1}{2}$ HP. and up. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, MA 2-9093.

OUTSTANDING CLOSE-out values. All new and nationally-known equipment. Complete description on request. 12-hole ice cream cabinets self-contained, includes

expansion valve and control, less machine \$295; 4-hole ice cream cabinets, remote \$195. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, MA 2-9093.

OUTSTANDING CLOSE-out values. All new and nationally-known equipment. Complete description on request. 4-can milk coolers complete \$155; 6-hole ice cream cabinets, complete, self-contained \$242; 8-hole units \$278; 10-hole unit \$365. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, MA 2-9093.

FOR SALE: 1 5" x 5" Worthington self contained Ammonia compressor complete with General Electric 3 phase motor and starter. Unit purchased new January, 1947. Used less than 300 hours. W. C. LORDE, Box 578, Belle Glade, Florida.

MOTORS FOR sale, from stock. Jack & Heintz, others at list; discount on quantity purchases. Special prices on scheduled deliveries. Fractionals and integrals, AC and DC. Send in your specific inquiries. MODERN SUPPLY COMPANY, 206 Fulton Street, New York 7, N. Y. CO. 7-0100.

SACRIFICING BRAND-new Copeland and other top brands. Condensing units in original crates. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$ HP, air-cooled. $\frac{1}{2}$ and 3 HP, water-cooled. All priced for immediate clearance. Write or wire now. ROCHELLE REFRIGERATION COMPANY, 31 East 4th Street, New York 3, N. Y.

SEALED CROSLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley F-12 units. Set of three \$5.25 (Part No. 1020) Installation tool 20¢. Immediate delivery Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

FOR QUICK sale—6 only, new Sterling "Lo-Temp" transport refrigeration units. Certified 13,000 BTU 0° temperature-Baker compressors—Trane evaporators—2 cyl. Hercules motor. Built by Sterling, Omaha, to sell for \$2,285.00. Our price \$775. Write, wire or phone WEBER MOTORS, Farnam at 26th Street, Omaha 2, Nebraska.

3-McQUAY S-20-4 "Freon" air conditioning $\frac{1}{2}$ ton units, \$425 each; 2-CR5 McQuay 5 ton comfort coolers, \$269.50 each; 2-Marlo UC 268—\$150 each. 3-UC 348—\$162.50 each. Ammonia unit coolers: 1-WD 1600 Drayer-Hanson "Freon" water defrost unit, \$195. BOX 2590 Air Conditioning & Refrigeration News.

FOR SALE two new 3 HP. water cooled Copeland condensing units \$450 each; two unit coolers each 1200 BTU capacity per degree T.D. \$170.00 each, one unit cooler 385 BTU capacity per degree T.D. \$80.00. All new and in original crates. FOB Williamsport, Pa. Box 2592 Air Conditioning & Refrigeration News.

50 THERMAL EXPANSION valves, full year guarantee period, assorted sizes $\frac{1}{2}$, 1 and 2 tons; 50# and 15# "Freon," 40# and 10# M.O.P. Methyl; $\frac{1}{2}$ - $\frac{1}{4}$ flare outlet and $\frac{1}{2}$ - $\frac{1}{4}$ flare inlet. While they last \$5.75 Each. BOX 2593 Air Conditioning & Refrigeration News.

FRANCHISES WANTED

DEALER IN refrigeration appliances currently operating well equipped workshop and maintaining trained staff desires exclusive Netherlands agency for established American refrigeration manufacturer. Apply to: Fa. P.H.v.d.Ven, Kleverlaan 7, Haarlem.

BUSINESS OPPORTUNITIES

MIAMI, FLORIDA—one of leading refrigeration, air conditioning, and appliance sales and service establishments—in same location ten years. Over \$150,000 yearly sales. Business with profitable past and unlimited future. Netted over \$20,000 past year. Located in fastest growing city in U.S.A.—Miami. Inquiries confidential. BOX 2565 Air Conditioning &

Steel Distributors' Survey Reveals Little Hope of Added Supply

NEW YORK CITY—Though the importance of the steel distributor in supplying steel users is recognized by steel mills, the distributor without a definite source of supply is out of luck.

That was confirmed in preliminary tabulations of a nationwide survey of steel mills conducted by the Association of Steel Distributors, Inc., here, Morris Rosoff, general counsel for the Association, disclosed.

Mill owners recognize the problem of distributors in trying to locate new sources of supply in order to meet the needs of their customers, but only one mill showed any interest in taking on new accounts, Rosoff revealed.

This firm stated in its reply to the survey: "Between 40 and 50% of our production at present goes to independent steel distributors, but we would be glad to take care of any warehouses in the association who may be interested in the purchase of cold drawn steel bars."

Typical answers from the others ran something like this:

"We are so hard pressed handling requirements of distributors previously served that it is impossible to share problems of distributors with whom we have had no previous experience."

"We are not in a position to accept orders from new customers."

"Could not take on any additional distributors at this time."

"So far behind in our orders now that we can offer no encouragement to any new distributors."

"Will not be able to improve performance."

"Due to abnormal demand for flat rolled steel and to extremely heavy obligations, will not be able to further participate."

"Cannot see the way clear to ship steel plates to new customers without 'putting ourselves in a hole' with our regular trade."

One mill showed its inclination to cooperate, however, by stating that if it could tell distributors where they might locate a source of supply, it would.

The idea of closer functional cooperation in the improvement of transportation, storing, and handling functions of steel distribution by independent distributors won the support of some mill owners. One even offered to meet with distributors to discuss functional problems.

Rosoff declared that the distributors association is not interested in "hasty action" on facts turned up by the survey, but rather wishes to lay the facts before both manufacturers and distributors.

He expressed the belief that "as fast as more facts can be developed to aid two-way interaction between steel executives to solve present dilemmas, the total output country can be increased more effectively."

Frank H. Michael Killed

DALLAS, Tex.—Frank H. Michael, 37, southwestern representative for Ready-Power Co., Detroit manufacturer of engined-refrigeration and engine-generator sets, was killed recently in an automobile accident near Austin, Tex.

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Receive the greatest trade paper in the Industry—AIR CONDITIONING & REFRIGERATION NEWS. Published every week. Brings you latest news and vital information on household refrigeration, commercial refrigeration, air conditioning, home freezers; manufacturing, distributing, retailing, servicing, and contracting. Only \$5 per year, 52 issues.

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Breaking Ground For New Oberc Quarters



No ground-breaking ceremony is complete unless the mayor is on hand, so when Mrs. J. M. Oberc turned the first snow-covered sod for the Oberc's new 158 by 100-ft. building out in Highland Park (a Detroit suburb), Mayor Norman Patterson lent the official touch. The architect, construction men, and members of Joe Oberc's parts and supplies wholesaling staff also participated. Left to right are A. J. Mattes, Oberc's sales manager; Frank E. Dow, chief engineer in charge of the construction project; Mr. Oberc; Mayor Patterson; Mrs. Oberc; Carl B. Marr of Marr & Marr, architect; H. Fred Campbell, president, Campbell Construction Co.; E. A. Germain, secretary of Oberc firm.

Wholesaler Planning Assembly Room and 'Customer's' Office

DETROIT—An assembly hall seating 125 persons will be included in the new building now under construction for J. M. Oberc, Inc., wholesaler of air conditioning and refrigeration parts and supplies here.

The hall will be used for sales promotion meetings, but it will also be made available to recognized refrigeration associations as a meeting hall, announced J. M. Oberc. Kitchen facilities will also be available.

Comprising more than 15,000 sq. ft., the new building will be located on Oakman Blvd. in Highland Park, a centrally located "suburb" within the Detroit city limits. Ground breaking ceremonies were held recently, and the completion date is scheduled for next April.

A private office with telephone facilities exclusively for customer use, a 70-ft. sales counter, modern restrooms, and a 70 by 20 ft. sales room for display of equipment, supplies, and fixtures are among other features planned. The display floor will be available to Oberc customers for demonstrations of equipment to their prospects.

Rear section of the building will house the shipping and receiving departments as well as provide storage space.

Blythe Offers New 88-Page Catalog

CHICAGO—H. W. Blythe Co., 2334 S. Michigan here, announces publication of a new wholesale refrigeration parts catalog, containing 88 pages of up-to-the-minute data on refrigeration needs.

List prices are shown throughout, providing trade protection for installation contractors and service engineers. A large 3-page index provides quick access to listings. Sectional arrangement of condensing units, compressor parts, coils, valves, dehydrators, tools and fittings, lends itself to easy selection of individual items.

Servel and Norge Win Direct Mail Honors

CLEVELAND—Servel, Inc. won two "best of industry awards" in the annual direct mail competition sponsored by the Direct Mail Advertisers Association, and Norge Division, Borg-Warner Corp., also won an award.

Servel won in the Air Conditioning class with a campaign on its gas air conditioner produced by Herbert W. Simpson, Inc., and also in the Home Appliance class for a refrigerator campaign prepared by Keller-Crescent Co.

The Norge prize-winning campaign in the Home Appliance class, was prepared by Campbell-Ewald Co.

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DEHYDRATORS
Fight
Moisture • Sediment • Acid
Protect against
Freezeups • clogging • corrosion
See your jobber
or write
McIntire
Connector Co.
Newark 5,
N.J.

REFRIGERATION INFORMATION IN A HANDY FORM

NOW READY

Audels Refrigeration and Air Conditioning Guide. Highly endorsed for Engineers, Servicemen, Shippers. Covering modern Principles, Servicing, Operation & Repairs of Household, Special, Commercial & Industrial units. Including Freon, Quick Freezing Lockers, Water Coolers and Air Conditioners. 1148 pages. YOUR QUESTIONS ANSWERED. 46 chapters All Fully Illustrated and Indexed for Ready Reference.

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Chicago Float Works Offers Technical Data

CHICAGO—Chicago Float Works, Inc. announces a new issue of its catalog which is available for general distribution for the first time. This bulletin describes in detail the complete line of copper, steel, monel, and stainless steel industrial floats offered by the company.

It includes engineering data necessary to make volume and buoyancy calculations, together with diagrams of standard float connections used with float valves and liquid level controllers.

Also pointed out in the catalog is Chicago Float Works' service in the preparation of detailed recommendations to suit individual float requirements, standard or special.

YOUR WHOLESALER HAS THEM RIGHT NOW No more shortages!

There are no more shortages of Mueller Brass Co. valves, fittings and accessories for refrigeration purposes. The condition which we have all had to endure through the war years, and the building-up period, has ended.

We know what every jobber has had to put up with in his efforts to get the material he wanted—we realize also, the trouble that the service engineer has faced to complete his jobs. We are now happy to say that our line is exceptionally complete.

Service engineers can place full confidence in Mueller Brass Co. time-tested valves and fittings. Strict laboratory control, skilled engineering, highest quality materials, precision workmanship, and rigid inspection, combine to make these products constantly dependable.

ORDER FROM YOUR WHOLESALER.
HE HAS THEM NOW.

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Frozen Foods Need 10,000 Refrigerated Trucks, Trailers Now

CHICAGO—The frozen food bonanza poses both a tremendous opportunity and a startling challenge for the trucking business, according to the Refrigeration Equipment Manufacturers Association.

Government economists recently declared that within about 10 years 50% of all perishable foods will be preserved by freezing. Today, though the amount of food frozen has increased 300% since prewar, only 2% of the country's perishable foods are frozen.

Frozen food interests look to trucks, which are peculiarly well adapted to transportation of frozen foods, for a big share of the unprecedented task of moving literally millions of tons of food at temperatures of zero or colder, REMA stated.

Frozen food economists, pointing to the importance of coast-to-coast shipments and door-to-door deliveries in maintaining the unbroken chain of zero transportation, estimate that more than 10,000 new refrigerated and insulated trucks and trailers are needed at once.

RAILROADS, PLANES CHALLENGED

The refrigeration industry, which also is working on the problems of zero refrigeration of railroad cars and cargo planes, looks upon the present and anticipated frozen food boom as a challenge equal to that which faces the trucking business. Continual efforts are being made to develop even lighter, smaller, and more economical refrigeration equipment for truck installation.

The refrigeration industry, mother of the frozen foods industry, already has multiplied three-fold to keep pace with its spectacular offspring.

In production today for trucks of all types are efficient units which supply the necessary zero temperatures. For long distance hauling there are complete units which can be installed by merely slipping the cooling unit in and bolting it to the truck body. Installation requires little skilled labor.

Temperatures as low as -10° F. with outside temperatures of 110° F. are obtained within properly insulated "reefers" by means of these so-called "packaged" units. Operated by gasoline engines or by power take-off, these units are economical to operate. For the large semi-trailers, models supplying two tons of refrigeration are most frequently used while for the somewhat smaller direct mounted bodies there are models rated at one ton capacity.

PUSH BUTTON CONTROLS

Push-button operation and automatic temperature control require little attention from the truck driver. Cargoes of fresh produce can be transported on one stretch of the trip and by changing the dial setting for lower temperatures, a load of frozen food can be carried on a return trip. Dial settings on this equipment make it possible to provide a wide range of temperatures depending upon the kind of perishable produce to be transported.

Hold-over type cold plates are especially suited for short distance hauling, retail delivery trucks and other trucking operations requiring a truck to be absent from its base for not more than 24 hours.

These plates can be charged by means of compressors mounted on the truck, but the usual practice is to maintain a central charging system located in the garage or parking space. Operation for as little as 10 cents a day is claimed for the cold plates. Temperatures as low as -15° F. make this equipment well suited for delivery of frozen foods.

Customers Now Wait--

(Concluded from Page 1, Column 3) since last spring, resistance to secondary makes has gone up 35% to 60%, asserted a local distributing organization of a large manufacturer following a recent survey.

Shipments of "off-brand" refrigerators were scheduled to increase substantially after Dec. 1, continuing to increase until a peak next April, asserted a distributor of several of these makes.

Three major manufacturers implied in the *Times* report that no falling off in refrigerator sales is to be expected, and that no great increases in supplies were seen in the near future at least.

Westinghouse reported that its allocations to distributors have been increasing steadily all year, however, and that during the current seven-week allocation period, which runs until Jan. 5, shipments reached their peak.

"No quota increase after that date is contemplated and no significant trend toward a sales slump in refrigerators has been noted," the company reportedly said.

Despite increasing production, little change in the tight supply situation was seen by Frigidaire, it was reported.

Steel supplies are the key to increased refrigerator production, according to a third manufacturer, who said that although output is rising, refrigerators will still be very short for the first six months of 1948.

Popular-priced models will not be available for immediate consumer delivery in the early part of next year, but larger units "may be more available," this manufacturer reportedly said.

J. H. Walker Dies After Long Illness

DETROIT—J. Herbert Walker, who recently received the F. Paul Anderson award from the American Society of Heating & Ventilating Engineers for outstanding scientific achievement in that field, died here on Dec. 1 following an illness of several months.

Walker was vice president of the Detroit Edison Co. Fifty-seven years old at the time of his death, he had worked 35 years for the utility.

Walker had written a great deal on heating and ventilating problems. As an Edison official, he had taken an active part in the company's organization planning and was a consultant on its commercial and engineering problems. Recently, he had handled employment, personnel planning, and the company's medical, safety, and legal departments.

Nielson Joins Cory Western Commercial Sales Force

CHICAGO—Appointment of Lester M. Nielson to the commercial sales force has just been announced by E. H. Sager, western division manager of Cory Corp.

Nielson, who will assist Sager in promotion and sale of commercial coffee brewing equipment on the West Coast, has for the last 12 years been associated with Standard Brands in New York and Chicago.

1'ST IN LINE AT THIRST TIME!

OASIS—made by the world's largest maker of electric drinking water coolers—is first in line when it comes to delivering complete thirst relief at low cost. Write for details.

The EBCO Manufacturing Co.
401 W. Town St., Columbus 8, Ohio

Predictors Say--

(Concluded from Page 1, Column 5) undertake a study to determine whether controls should be applied to the following:

Textiles, nitrogen, soda ash, caustic soda, aluminum, other non-ferrous metals, newsprint, building materials (particularly nails), soil pipe, gypsum board, and lumber.

In his testimony before the House committee, Secretary Harriman indicated, by replies to a series of questions, that he and his colleagues would first seek to solve bottlenecks in critical areas of the industrial economy by agreement with the industries concerned for a voluntary program. The legal authority being sought, he said, would only be needed to bring into line the "unwilling minority."

Rep. Jesse P. Wolcott of Michigan tried to pin down Secretary Harriman as to particular instances in which he would invoke price and wage ceilings, provided Congress voted such powers. The Secretary reiterated the position that the Administration sought such powers of reserve, to be used only in emergency.

New \$13,500 Building Will House Air Conditioning Firm

SPRINGFIELD, Ill.—A city building permit has been issued to Ivan J. Falconer, for construction of a \$13,500 new commercial building at 1429 S. 11th street. The building will house Falconer's air conditioning business and will be divided into shop area, office, and display room.

The company hopes to get in its new quarters by June, Ross stated.

"At the rear of the site of the new building, the company has 100 or

more feet of space which can be used for future expansion."

Mfrs. Total Sales Rise By \$1 Billion In Oct., But Daily Rate Stays Same

(Concluded from Page 1, Column 8) it: "You could have knocked me over with an order-blank. Now I'm supposed to call on housewives. Sounds like fun."

This same team will "put the show on the road" at St. Louis, Dec. 5 and 6; Houston, Dec. 10 and 11; Savannah, Dec. 16 and 17; Philadelphia, Jan. 6 and 7; New York, Jan. 9 and 10; San Francisco, Jan. 16 and 17; Chicago, Jan. 23 and 24.

According to Hertzler, York will continue its policy of supplying tailor-made installations of heavy refrigeration and air conditioning jobs to industrial firms and commercial accounts, as it has in the past.

But York's "new look" means that this conservative old organization will broaden its activity by grafting specialty selling methods upon its engineering traditions.

Sarabay Frozen Foods, Inc. Constructs \$100,000 Plant

VENICE, Fla.—Sarabay Frozen Foods, Inc., has begun construction of its new plant on the Tamiami trail. The new plant, to cost approximately \$100,000, is expected to be ready for full operation sometime in February. There will be approximately 560 individual lockers.

The company will provide a weekly delivery service to each customer in Englewood, Sarasota, and Venice areas, according to the management. This service will include items currently stored in the customer's own locker and such other standard articles of frozen foods.



Once every 64 minutes, preceded by a deep-throated rumble and an earth-shaking growl, Old Faithful casts steam and boiling water toward the blue Wyoming sky. Its beauty and its regularity combine to make this geyser one of nature's greatest wonders. Visitors to Yellowstone National Park are awed and delighted by this natural clock which, within the memory of man, has not deviated from its self-regulated schedule.

* The kind of performance delivered by Mills Condensing Units.

Mills Condensing Units

Products of Mills Industries, Incorporated
4100 Fullerton Avenue, Chicago 39, Illinois

CHASE
CHICAGO

Helpful...

You will find the CHASE catalog helpful in many ways. Saves time—places useful buying information at your finger tips—and carries list prices to protect your profits.

Send for copy on your letterhead.

CHASE REFRIGERATION SUPPLY CO.
546 West 119th Street Chicago 28, Ill.

PHONE PULLMAN 5125